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CIS

PROFESSIONAL WOMEN AND MINORITIES

A Manpower Data Resource Service

Fourth Edition

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FOREWORD

This book is designed to provide current and historical statistics about the professional segment of the U.S. population and particularly the participation and availability of women and minorities in those areas which generally require formal education to at least the baccalaureate level. Because more information is available in some fields than in others, the comprehensiveness of coverage varies. While we have attempted to locate all available data sources, and to provide the most current statistics available, we welcome notification of any data that we may have missed. Between annual editions, new data are published regularly in MANPOWER COMMENTS, a periodical digest available from the Scientific Manpower Commission (see Bibliography for details).

We wish to thank those professional associations, women's groups and individuals who have responded to our request for current information or data, and for their permission to use that data in this compilation. We also express our appreciation to the more than 2,000 users of the earlier editions for their continued interest in the data both to measure their progress and to formulate plans.

Our special thanks go to the Ford Foundation for a grant which supported the final six months of work in collecting, assembling, reviewing and publishing the first edition of this book in 1975. Without that first edition, this continuing data source would not have been possible. We also acknowledge with thanks the special assistance of Sally Yochelson and Kathryn Parker.

Betty M. Vetter, Eleanor L. Babco and
Susan Jensen-Fisher

INTRODUCTION

Organization of the Book

The data tables are organized in ten chapters, and tables are numbered consecutively within each chapter.

The Table of Contents outlines both the chapter arrangement and the organization of tables within the chapter. The first five chapters on general enrollments, general degrees, general professions, general workforce and academic workforce include both tables which do not specify subject fields and tables where several subject fields are included. In the section on general professions, data for individual professions such as business administration and law follow tables that include data for multiple fields.

The organization of tables in chapters six through ten, which are devoted to subject fields, provide data on degrees (doctorates first) followed by enrollments, general workforce and academic workforce participation. Except for tables which include both sex and minority proportions, those which delineate the population by sex generally precede those which delineate by minority status.

When the field is designated at the top of the page, table headings do not necessarily include the name of the field.

When the year or years covered by the table are included within the table, the dates are not always repeated in the table title.

The Index is by page number. The Index, rather than the Table of Contents, is the place to begin a search for data in a particular field, since enrollment, degree and employment information about that field will also be found in the early chapters. Cross-indexing allows finding the data references in a number of ways.

The source or sources of data for each table are noted above the table. The bibliography, organized alphabetically by publisher, provides specific information about each source.

An annotated list of Recruitment Resources is arranged alphabetically for sources pertaining to specific disciplines followed by rosters with general or multifield coverage.

The Data

More than 200 published and previously unpublished data sources were used to prepare the statistical tables and charts in this book, including reports and other materials from government agencies, professional associations and women's and/or minority groups and caucuses. The source or sources for each table appear at the top of the table, with the full bibliographic entry provided in the Bibliography.

Generally, exact correlation of results of different surveys is not possible since it is rare to find two data sources with exactly the same time and population base. Different results occur because of differences

in the survey populations, in the time frames, in the way similar questions were asked, in terminology, in analysis, or in the type of respondent. For example, degree data collected by the National Center for Education Statistics is obtained from college and university registrars, while that collected by the professional societies generally comes from department heads and that collected by the National Research Council comes from the doctorate recipients themselves. Thus, while degree data will be similar, it is not identical from one source to another.

Different methods of analysis, particularly in data on minorities, will also produce different statistical results. The several problems for the data analyst include the method of treatment for non-respondents, the respondents who list multiple minority status, responses from a third party rather than from the individuals themselves, inclusion or exclusion of non-citizens in the survey population or unrepresentative population samples.

Differences in treatment of non-respondents to questions of sex or ethnicity may produce large statistical differences in calculating the proportion of minorities or women within a particular population.

Some surveys assume that non-respondents to the sex or ethnic question are in the same proportion as respondents, and remove all non-respondents before calculating the percentages of women and minority participants. Still others calculate percentages from a total which includes non-respondents, thus giving a lower percentage for minorities than may be the case. Additionally, many studies dealing with minority populations do not separate foreign nationals from U.S. citizens or those eligible for citizenship. This single factor, particularly within the Asian minority among scientists and engineers, changes the sex and minority proportion substantially, as does the inclusion of foreign nationals in the base numbers for enrollments and degrees in such graduate fields as engineering. This edition includes more data than were previously available on citizenship, particularly in the science and engineering fields.

In most data sets, minority data are not subdivided by sex, and conversely data on women fail to distinguish majority from minority women. Thus, the availability of minority women in specific fields is often difficult to determine. Where available, we have included both the sex and minority subdivision. Included for the first time in this edition are data from the 1980 Census Special EEO File, which provides both sex and race/ethnicity breakouts by occupation.

This book does not attempt to determine which data are more likely to be correct when differences occur, but when available, the population base used for calculating the percentages is indicated in the table title or footnotes.

Correlating Degree and Workforce Data

There are frequently fairly major differences between the proportions of degrees granted to women and minorities in any particular field and the proportions of those persons found in the workforce for that field. This may occur because of field switching, differences in nomenclature between degree fields and job titles, and because of the problems of similar but non-identical population bases outlined above. The lower proportion of women in a working population than their proportion of earned degrees may also indicate that proportionally more women than men have left the workforce in that field either temporarily or permanently. Some data sets show that women are somewhat less likely than men to find employment that is linked with their major field of study, particularly among recent graduates.

Few data are available on the workforce participation of women and minorities in the arts, humanities and education. One reason is that persons with degrees in those fields may appear in almost any occupation in the workforce, and are generally classed in the same field as the degree field only when they are in the academic workforce.

In many instances, this book incorporates both historical and current data so that progress may be measured and changing trend lines incorporated in planning for the future. In some cases, we have included older data because nothing more current could be obtained. However, in this edition, we have dropped most tables where the most recent data available are for 1978 or earlier.

Through the wording of table headings and the use of footnotes to tables, we have tried to offer as much information as possible regarding the inclusiveness of the data in any table. Usually a more comprehensive explanation of methodology can be found in the original data source which is listed in the Bibliography.

Terminology for Minority Groups

Only in the past few years has a common set of designations for minority populations come into general use. In this book, tables generally use the terminology of the original source from which the table was derived.

AFFIRMATIVE ACTION

Federal laws and regulations prohibit discrimination in conditions of employment including recruitment, hiring, lay-off, discharge and recall, and in-service training; opportunities for promotion; participation in training programs; wages and salaries; sick leave time and pay; vacation time and pay; over-time work and pay; medical, hospital, life and accident insurance; and optional and compulsory retirement.

Statutes and Orders Requiring Equal Employment Opportunity and Affirmative Action

The Equal Pay Act of 1963, the first sex discrimination legislation enacted, requires equal pay for equal work regardless of sex. Title IX of the Education Amendments Act of 1972 extends the coverage to executive, administrative and professional employees, including all faculty; and to outside sales people.

Executive Order 11246 as amended by Executive Order 11375 prohibits discrimination in employment by all employers who hold federal contracts, and requires affirmative action programs by all federal contractors and sub-contractors. Firms with contracts over $50,000 and with fifty or more employees must develop and implement written programs of affirmative action. Proposed regulations have been issued , and a new Executive Order not yet published at press time is expected to limit these requirements to contractors with more than 100 employees and contracts of more than $100,000.

Title VI of the Civil Rights Act of 1964 forbids discrimination against students on the basis of race, color, or national origin in all federally assisted programs. Employment is not generally covered except when employment is the purpose of the assistance.

Title VII of the Civil Rights Act of 1964 as amended by the Equal Employment Opportunity Act of 1972 forbids discrimination on the basis of race, color, national origin, religion or sex in any term, condition of privilege of employment, including sexual harassment, by unions, employment agencies and employers. The law was amended on March 24, 1972 to cover all public and private educational institutions, as well as state and local governments. It applies to all employers, public or private, whether or not they recieve any federal funds. Title VII covers all private employers of fifteen or more persons.

Title IX of the Education Amendments of 1972 forbids discrimination on the basis of sex in all federally assisted education programs in all institutions, public and private, that receive federal monies through grants, loans or contracts. The Supreme Court determined in the Spring of 1982 that Title IX's prohibition of sex discrimination applies to both students and employees of educational institutions. Title IX Regulations apply the law broadly to activities "assisted or benefited by federal funds," but some lower courts have ruled that Title IX applies only to programs that receive direct federal support. A case presently before the Supreme Court could address the scope of Title IX application.

The Age Discrimination and Employment Act of 1967 prohibits arbitrary age discrimination in employment.

The Vocational Rehabilitation Act of 1973 prohibits discrimination against handicapped persons by federal contractors, and requires such contractors to take affirmative action to employ such persons.

Regulation and Enforcement

Prior to 1978, a number of federal agencies were variously responsible for writing regulations to govern these orders and statutes and to enforce the regulations. These agencies included the Labor Department, the Justice Department, the Department of Health, Education and Welfare, and the Equal Employment Opportunity Commission which is appointed by the President.

On February 23, 1978, President Carter submitted to Congress a plan to reorganize federal equal employment opportunity enforcement activities. EEOC is the principal agency responsible for enforcement for all public and private non-federal employers and unions, and within the federal government. EEOC took over from the Labor Department on July 1, 1979 enforcement of the Equal Pay Act and the Age Discrimination Act.

Enforcement of Executive Order 11246 as amended by Executive Order 12086 and Executive Order 11375 remains with the Office of Federal Contract Compliance Programs (OFCCP) in the Department of Labor. All federal contractors deal with OFCCP.

The Justice Department continues to have responsibility for litigation against state and local governments under Title VII, and represents the government in suits against federal contractors. The Attorney General may initiate "pattern and practice" suits under Title VII in the public sector.

The Department of Education enforces compliance with Title IX.

EEOC, the Justice Department and the Labor Department published final regulations for uniform employment guidelines which became effective September 25, 1978. The regulations are published as Part IV in the August 25, 1978 issue of the Federal Register. New regulations based on the amended Executive Order are expected to be published in the summer of 1983. They are expected to eliminate pre-contract award compliance review, and limit suits to "identifiable victims of bias" rather than allowing broad, class action suits for unnamed individuals who might have been affected.

What is Affirmative Action?

Broadly speaking, affirmative action consists of actions to end discrimination and to remedy the effects of past discrimination. It includes such activities as notifying women's and minority groups about job openings, advertising job openings rather than relying on word-of-mouth notification, developing recruitment procedures aimed at women and minorities as well as other qualified applicants, and providing equal opportunities for advancement.

Affirmative Action under Executive Order 11246 also requires establishment of an Affirmative Action Plan which includes numerical goals and time tables for increasing the participation of women and/or minorities.

Goals are targets for the inclusion of people previously excluded, and are an attempt to estimate the composition of the employer's workforce if there were no illegal discrimination based on race or sex. In general, goals for professional positions are aligned with the number or percentage of qualified women or minorities available rather than with their general representation within the population.

Quotas, on the other hand, are illegal unless assigned by a court as the result of a finding of discrimination, since they are in themselves discriminatory and act to keep some qualified people out of the applicant pool to be considered.

Under the Executive Order, all job classifications must be reviewed in order to identify under-utilization of women and minorities. Data should be provided simultaneously on race and sex. If current recruitment practices have resulted in a "significantly lower representation" of women and minorities in the applicant pool than would be expected from their availability in the labor force, then new sources of recruitment must be developed. The new Executive Order is expected to state that an employer will be assumed to be utilizing "reasonable" numbers of persons in protected classes if his workforce includes at least 80 percent of their representation within the eligible populations.

Affirmative action plans are required to include a system of accountability and monitoring. This system may be centralized in an institution-wide or a corporation-wide office which maintains records and monitors individual units or departments and makes an annual report; or in individual units or departments which may maintain records separately of all applicants and hires as well as records of the efforts made to recruit women and minorities. In either case, records should allow for an ongoing analysis of all employment decisions in recruiting, hiring, promoting and setting salaries.

The employer sets the criteria for every job, both in terms of the level of academic preparation required, experience and other factors. The criteria must be applied equally to men and women and to those of all ethnic backgrounds. They must be clearly related to the job to be filled, and they must not in themselves be discriminatory. For example, criteria which gave preference to the hiring of persons who did their undergraduate work at an Ivy League School would be discriminatory in that women, have, until recently, been denied the opportunity to attend such institutions.

The Uniform Guidelines on Employee Selection Procedures protect the rights of workers to be hired and promoted on the basis of job-related standards and without regard to race, sex or national origin. These guidelines apply to all employers, public and private, including academic institutions. Their underlying principle is that tests and other selection procedures that have an adverse impact on minorities and women are illegal unless validated by showing a clear relation between performance on the test and performance on the job. The guidelines adopt a "rule of thumb" as a practical but not absolute, means of determining whether there has been an adverse impact. Generally, a selection rate for any race, sex or ethnic group which is less than 80% of the rate for the group with the highest selection rate is regarded as adverse impact. For professional positions in which women or minorities represent less than 20% of the available pool, statistical evidence of such proportions will be necessary.

Evidence of the validity of a selection procedure generally is not required if there is no adverse impact. The guidelines provide that, in considering whether to take enforcement action, the government will take into account the general posture of the employer regarding equal employment opportunity, including its affirmative action plan and the results achieved under the plan.

Numerical goals have been upheld in the courts as relief for a substantiated pattern of discrimination. Each goal is tailor-made to a specific situation, taking into account expected turnover, vacancies, promotions and the availability of qualified women and minorities. The goal varies for different job classifications and may be general as for "chemists" or more specific as for "doctoral organic chemists."

If an institution fails to meet its goals, and if adverse impact on women or minorities is indicated by its results, that institution must show that it has made a good faith effort to recruit, hire and promote qualified women and minorities; and it must be able to produce records documenting these efforts. Such efforts may include contact with women's and minority groups or caucuses including those relevant to particular disciplines (see Recruitment Resources); contact with individual women or minority professionals for referral of candidates; evidence of evaluation of those women and minorities already employed who might qualify for the job openings; and letters to colleagues and job advertisements which indicate that the employer welcomes applications from all qualified candidates.

If the best qualified person is white and male, that person can be hired. However, if called upon to do so, the employer must be able to demonstrate that a genuine good faith effort has been made to recruit qualified women and minorities; that objective, job-related criteria were specified before the hiring process; and that these criteria have been applied equally to women, minorities and white men.

Many regulations issued during previous administrations have been under review. Some changes other than those outlined here may result from this review process.

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GENERAL ENROLLMENTS

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SOURCE: National Center for Health Statistics, Personal Communication

TABLE 1-1

LIVE BIRTHS IN THE U.S. BY SEX: 1933-1980

YEAR	TOTAL	MALE	FEMALE
1933	2,081,232	1,068,871	1,012,361
1934	2,167,536	1,112,703	1,054,933
1935	2,155.105	1,105,489	1,049,616
1936	2,144,790	1,099,465	1,045,325
1937	2,203,337	1,130,641	1,072,696
1938	2,286,962	1,172,541	1,114,421
1939	2,265,558	1,162,600	1,102,988
1940	2,360,399	1,211,684	1,148,715
1941	2,513,427	1,289,734	1,223,693
1942	2,808,996	1,444,365	1,364,631
1943	2,936,860	1,508,959	1,427,901
1944	2,794,800	1,435,301	1,359,499
1945	2,735,456	1,404,587	1,330,869
1946	3,288,672	1,691,220	1,597,452
1947	3,699,940	1,899,876	1,800,064
1948	3,535,068	1,813,852	1,721,216
1949	3,559,529	1,826,352	1,733,177
1950	3,554,149	1,823,555	1,730,594
1951	3,750,850	1,923,020	1,827,830
1952	3,846,986	1,971,262	1,875,724
1953	3,902,120	2,001,798	1,900,322
1954	4,017,362	2,059,068	1,958,294
1955	4,047,295	2,073,719	1,973,576
1956	4,163,090	2,133,588	2,029,502
1957	4,254,784	2,179,960	2,074,824
1958	4,203,812	2,152,546	2,051,266
1959	4,244,796	2,173,638	2,071,158
1960	4,257,850	2,179,708	2,078,142
1961	4,268,326	2,186,274	2,082,052
1962	4,167,362	2,132,466	2,034,896
1963	4,098,020	2,101,632	1,996,388
1964	4,027,490	2,060,162	1,967,328
1965	3,760,358	1,927,054	1,833,304
1966	3,606,274	1,845,862	1,760,412
1967	3,520,959	1,803,388	1,717,571
1968	3,501,564	1,796,326	1,705,238
1969	3,600,206	1,846,572	1,753,634
1970	3,731,386	1,915,378	1,816,008
1971	3,555,970	1,822,910	1,733,060
1972	3,258,411	1,669,927	1,588,484
1973	3,136,965	1,608,326	1,528,639
1974	3,159,958	1,622,114	1,537,844
1975	3,144,198	1,613,135	1,531,063
1976	3,167,788	1,624,436	1,543,352
1977	3,326,632	1,705,916	1,620,716
1978	3,333,279	1,709,394	1,623,885
1979	3,494,398	1,791,267	1,703,131
1980	3,598,000*		

*Estimated

SOURCE: Statistics of Public Elementary and Secondary Day Schools, Fall 1964 through 1976; Statistics of State School Systems 1953-54 through 1959-60; Statistics of Nonpublic Elementary and Secondary Schools, 1965-66 and 1970-71; Statistics of Public and Nonpublic Elementary and Secondary Day Schools, 1968-69; and Nonpublic School Enrollments in Grades 9-12, Fall 1964, and Graduates, 1963-64, National Center for Education Statistics, U.S. Department of Health and Human Services

TABLE 1-2

HIGH SCHOOL GRADUATES IN THE UNITED STATES 1954-55 - 1986-87

YEAR	Total High School Graduates[1]	SEX	
		Boys	Girls
1954-55	1,351	648	703
1955-56	1,421	682	739
1956-57	1,446	696	750
1957-58	1,513	729	784
1958-59	1,639	790	849
1959-60	1,864	898	966
1960-61	1,971	958	1,013
1961-62	1,925	941	984
1962-63	1,950	959	991
1963-64	2,290	1,123	1,167
1964-65	2,665	1,314	1,351
1965-66	2,632	1,308	1,325
1966-67	2,679	1,332	1,348
1967-68	2,702	1,341	1,360
1968-69	2,829	1,402	1,427
1969-70	2,896	1,433	1,463
1970-71	2,944	1,457	1,487
1971-72	3,008	1,490	1,518
1972-73	3,043	1,503	1,540
1973-74	3,081	1,515	1,566
1974-75	3,140	1,545	1,595
1975-76	3,153	1,572	1,581
			Projected[4]
1976-77	3,149	1,571	1,578
1977-78	3,160	1,578	1,582
1978-79	3,144	1,570	1,574
1979-80	3,097	1,547	1,550
1980-81	3,043	1,522	1,521
1981-82	2,944	1,463	1,481
1982-83	2,835	1,415	1,420
1983-84	2,740	1,368	1,372
1984-85	2,692	1,344	1,348
1985-86	2,694	1,345	1,349
1986-87	2,740	1,369	1,371

[1]Includes regular public and nonpublic schools, residential schools for exceptional children, subcollegiate departments of institutions of higher education, Federal schools for Indians, and federally operated schools on Federal installations. Excludes equivalency certificates. More than 99 percent of public school graduates and 97 percent of nonpublic school graduates are graduates of regular day schools.

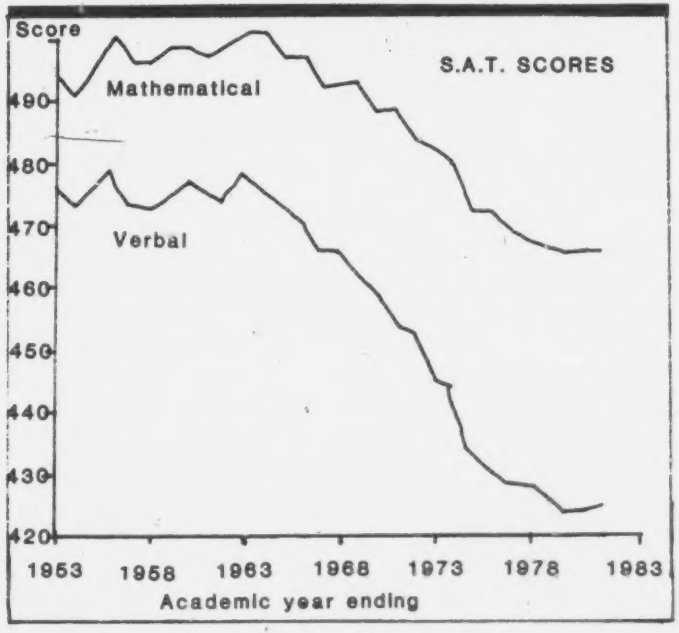
[4]The projections of public high school graduates are based on the assumption that for boys and girls separately, the number of high school graduates expressed as a percentage of the population averaging 18 years of age will remain constant at the 1975-1976 level through 1986.

The projection of nonpublic high school graduates is based on the following assumptions: (1) The number of nonpublic high school graduates will remain approximately the same throughout the projection period. (2) The percentage of boys among nonpublic high school graduates (48.1 percent in 1964-65) will remain constant to 1986-87.

SOURCE: College Entrance Examination Board

TABLE 1-3

SCHOLASTIC APTITUDE TEST SCORES, BY SEX, 1958 - 1982



SAT Score Averages for College-Bound Seniors, 1967-1982*

	Verbal			Mathematical		
	Male	*Female*	*Total*	*Male*	*Female*	*Total*
1967	463	468	466	514	467	492
1968	464	466	466	512	470	492
1969	459	466	463	513	470	493
1970	459	461	460	509	465	488
1971	454	457	455	507	466	488
1972	454	452	453	505	461	484
1973	446	443	445	502	460	481
1974	447	442	444	501	459	480
1975	437	431	434	495	449	472
1976	433	430	431	497	446	472
1977	431	427	429	497	445	470
1978	433	425	429	494	444	468
1979	431	423	427	493	443	467
1980	428	420	424	491	443	466
1981	430	418	424	492	443	466
1982	431	421	426	493	443	467

*The averages for 1967 through 1971 are estimates of the averages that would have been reported for college-bound seniors of those years if such reports had been produced.

TABLE 1-4

ETHNIC BACKGROUND OF 1981-82 S.A.T. TEST TAKERS

	Male		Female		Total	
	Number	%	Number	%	Number	%
American Indian	2,317	0.5	2,560	0.5	4,877	0.5
Black	32,063	7.5	47,931	10.1	79,994	8.9
Mexican-American	7,648	1.8	8,291	1.7	15,939	1.8
Oriental	17,181	4.0	16,913	3.5	34,094	3.8
Puerto Rican	4,737	1.1	5,742	1.2	10,479	1.2
White	351,983	82.6	385,501	80.9	737,484	81.7
Other	10,157	2.4	9,806	2.1	19,963	2.2
Number Responding	426,086		476,744		902,830	100.0
Minority Students	74,103	17.4	91,243	19.1	165,346	18.3

SOURCE: National Center for Education Statistics, Unpublished Data

TABLE 1-5

PERCENT OF HIGH SCHOOL SENIORS WHO TOOK MATH AND SCIENCE COURSES, SPRING 1980

COURSE	Total	Boys	Girls	White	Black	Hispanic	Am. Ind.	Asian
Algebra I	79.3	78.7	77.9	81.2	68.4	67.0	60.9	87.9
Algebra II	49.0	51.3	47.0	50.4	39.0	37.6	31.8	75.6
Geometry	56.2	58.0	54.6	59.5	37.9	38.5	34.3	78.8
Trigonometry	25.6	29.9	21.7	27.1	15.2	14.6	17.2	50.4
Calculus	7.8	9.8	6.0	8.2	4.5	4.2	5.1	22.1
Physics	19.4	25.7	13.6	19.5	18.6	14.9	17.1	34.9
Chemistry	37.3	39.2	35.4	38.8	28.2	25.6	23.9	58.8

TABLE 1-6

PERCENT OF HIGH SCHOOL SENIORS WHO TOOK TWO OR MORE YEARS OF SUBJECT COURSES IN GRADES 10-12, SPRING 1980

	Total	Boys	Girls	White	Black	Hispanic	Am. Ind.	Asian
English & Literature								
2-2 1/2 yrs.	14.6	15.3	13.8	15.1	10.3	14.6	12.8	19.0
3 or more yrs.	81.0	79.3	82.6	81.0	82.8	76.2	76.6	76.8
History or Social Studies								
2-2 1/2 yrs.	41.8	40.8	42.7	42.4	38.4	40.0	37.8	46.1
3 or more yrs.	39.1	40.1	38.2	39.2	38.4	34.7	33.4	37.0
Mathematics								
2-2 1/2 yrs	32.8	30.6	34.8	32.3	36.0	35.3	28.2	36.0
3 or more yrs.	33.4	39.1	28.0	33.0	35.2	27.4	22.0	47.5
Science								
2-2 1/2 yrs.	29.9	29.6	30.1	29.2	32.6	31.7	26.7	32.0
3 or more yrs.	22.3	26.5	18.5	23.1	19.3	14.2	12.1	32.2

SOURCE: College Bound Seniors, 1982, Admissions Testing Program of the College Board

TABLE 1-7

NUMBER OF YEARS OF STUDY BY SUBJECT, COLLEGE BOUND SENIORS, 1981-82

	English		Mathematics		For. Languages		Bio. Sciences		Phy. Sciences		Soc. Studies	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
	%	%	%	%	%	%	%	%	%	%	%	%
No Courses	0.3	0.2	0.3	0.3	15.8	10.8	5.6	4.2	6.1	10.6	0.7	0.6
One Year	1.1	0.8	1.3	2.0	13.9	12.5	61.5	60.4	25.5	37.2	2.2	2.2
Two Years	1.6	1.1	7.7	13.4	36.6	34.2	25.2	27.9	36.4	34.5	16.0	17.4
Three Years	5.7	5.2	21.4	30.4	19.2	21.7	5.2	5.3	24.9	14.5	39.3	41.7
Four Years	82.7	81.7	55.4	45.1	11.6	16.1	1.9	1.6	5.3	2.4	35.7	32.5
Five or More Years	8.7	11.1	13.9	9.7	3.0	4.8	0.8	0.7	1.7	0.8	6.1	5.7
Number Responding	435317	486571	434967	486176	431763	483621	433013	484291	432398	482574	432649	483843
Mean Number Years	3.96	4.01	3.72	3.44	2.06	2.34	1.39	1.42	2.03	1.63	3.25	3.20
Mean Number (Total)	3.98		3.57		2.21		1.40		1.82		3.23	

SOURCE: College Bound Seniors, 1982, Admissions Testing Program of the College Board

TABLE 1-8

PERCENT OF COLLEGE-BOUND SENIORS INTENDING TO STUDY VARIOUS FIELDS, BY SEX, 1982

Number Responding	421,939 Males	473,718 Females	895,657 Total		
	Male %	Female %	Total %	SAT Verbal Mean	SAT Math Mean
Arts and Humanities	9.3	12.5	11.0	436	452
Architecture/Environmental Design	3.0	0.8	1.8	412	486
Art	2.2	5.0	3.7	403	419
English/Literature	0.9	1.9	1.4	512	483
Foreign Languages	0.3	1.3	0.8	477	478
Music	1.6	1.5	1.6	437	453
Philosophy and Religion	0.5	0.3	0.4	464	481
Theater Arts	0.7	1.7	1.3	441	437
Biological Sciences and Related Areas	14.8	23.6	19.5	434	470
Agriculture	1.9	0.8	1.3	402	436
Biological Sciences	3.3	3.1	3.2	472	504
Forestry/Conservation	1.1	0.3	0.7	421	455
Health and Medical	8.5	19.3	14.2	429	467
Business, Commerce, and Communications	20.8	23.7	22.4	409	446
Business and Commerce	17.5	19.8	18.7	401	446
Communications	3.4	3.9	3.6	446	446
Physical Sciences and Related Areas	35.3	12.6	23.3	442	524
Computer Science/Systems Analysis	8.8	6.7	7.7	417	489
Engineering	22.5	3.8	12.6	449	537
Mathematics	1.1	1.0	1.1	455	569
Physical Sciences	2.9	1.0	1.9	496	558
Social Sciences and Related Areas	13.1	21.4	17.5	434	451
Education	2.2	7.4	5.0	394	419
Ethnic Studies	0.0	0.0	0.0	367	377
Geography	0.1	0.0	0.0	416	452
History and Cultures	0.7	0.4	0.5	485	475
Home Economics	0.1	0.9	0.5	385	407
Library Science	0.0	0.0	0.0	483	449
Military Science	1.6	0.1	0.7	434	474
Psychology	1.3	5.2	3.4	436	446
Social Sciences	7.2	7.3	7.2	461	475
Miscellaneous	6.7	6.2	6.4	424	461
Other	1.1	0.9	1.0	399	433
Trade and Vocational	1.1	0.8	0.9	350	389
Undecided	4.5	4.5	4.5	444	481

SOURCE: National Norms for Entering College Freshmen Series 1966-1982, American Council on Education

TABLE 1-9

RACIAL BACKGROUND OF FRESHMEN IN ALL INSTITUTIONS OF HIGHER EDUCATION, SELECTED YEARS, 1971 - 1982

RACIAL BACKGROUND	1971	1973	1975	1977	1979	1980	1981	1982
WHITE/CAUCASIAN								
Men	92.1	89.1	87.2	87.9	87.2	87.0	89.5	89.0
Women	90.6	87.9	85.6	86.0	85.4	85.1	87.6	87.5
BLACK/NEGRO/AFRO-AMERICAN								
Men	5.5	7.0	8.0	7.8	8.2	8.0	7.5	7.6
Women	7.2	8.6	10.1	9.8	10.1	10.3	9.6	9.4
AMERICAN INDIAN								
Men	1.0	0.8	0.9	0.8	1.0	0.8	1.1	1.0
Women	0.9	1.0	0.8	0.7	1.0	0.7	1.0	0.9
ORIENTAL								
Men	0.5	1.2	1.6	1.2	1.6	1.6	1.2	1.5
Women	0.4	1.0	1.3	1.0	1.2	1.2	1.0	1.3
MEXICAN AMERICAN/CHICANO								
Men	1.1	1.3	1.8	1.4	1.1	2.1	0.9	0.9
Women	1.1	1.2	1.6	1.4	1.2	2.0	0.9	0.9
PUERTO RICAN/AMERICAN								
Men	0.2	0.5	0.7	0.9	1.1	0.8	0.6	0.9
Women	0.2	0.4	0.6	1.0	1.0	0.9	0.6	0.9
OTHER								
Men	1.2	1.5	2.1	1.9	2.2	1.8	1.8	1.5
Women	1.1	1.5	1.7	1.6	1.8	1.6	1.2	1.3

SOURCE: The American Freshmen: National Norms for Fall 1971 through 1981, American Council on Education, Office of Research and Cooperative Institutional Research Program, American Council on Education, University of California at Los Angeles

TABLE 1-10

PERCENTAGE DISTRIBUTION OF FRESHMEN BY PROBABLE MAJOR FIELD OF STUDY IN ALL INSTITUTIONS OF HIGHER EDUCATION, SELECTED YEARS, 1971 - 1981

PROBABLE MAJOR FIELD OF STUDY	1971		1973		1975		1978		1980		1981		1982	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
Agriculture & Forestry	5.4	.7	4.4	1.0	5.7	1.9	4.5	2.0	4.1	1.8	5.0	2.2	3.8	1.4
Arts and Humanities*	16.8	20.5	10.1	15.0	12.7	12.8	7.4	10.6	6.4	10.1	7.4	10.5	6.8	9.7
Biological Sciences	4.4	2.7	8.2	5.7	7.1	5.5	4.8	4.4	3.7	3.8	3.9	3.7	3.7	3.8
Business	18.3	14.2	21.1	14.0	20.1	17.5	25.0	23.1	22.9	24.5	22.7	25.0	22.3	25.7
Education	4.6	15.9	5.2	19.6	4.6	15.5	3.3	12.1	3.3	11.6	2.8	10.8	2.4	9.0
Engineering	13.2	.3	12.1	.7	14.0	1.3	18.8	2.3	21.0	3.2	21.3	3.2	22.3	3.6
Health Professions (Non-M.D.)	2.6	16.1	4.6	16.5	1.8	13.2	2.0	14.6	1.9	13.3	2.0	13.1	1.6	17.8
Mathematics/Statistics	2.6	2.9	1.8	1.6	1.1	1.1	1.1	0.8	.7	.6	.6	.6	.6	.7
Computer Science							1.6	1.2	2.7	2.4	3.9	3.2	4.9	4.0
Physical Sciences	3.1	.8	4.2	1.1	4.0	1.3	3.5	1.3	3.6	1.6	3.9	1.0	2.6	1.0
Premed, Predent, Prevet.							4.0	2.9	3.6	3.2	3.1	2.9	3.2	3.0
Social Sciences*	5.6	12.2	5.5	11.7	3.7	8.9	5.0	9.5	4.5	8.6	4.3	7.9	4.2	7.2
Other Fields (Technical)	7.3	2.6	8.4	2.0	10.3	6.7	7.0	2.0	8.5	2.9	8.5	3.6	9.7	4.3
Other Fields (Non-Technical)	1.4	5.0	7.1	3.5	10.2	8.8	8.1	7.9	9.3	6.9	6.7	6.9	8.2	3.3
Undecided	2.3	2.3	4.5	4.9	4.6	5.5	3.9	5.3	3.8	5.5	3.9	5.4	3.7	5.5

* Political Science is included in Arts and Humanities through 1975 and in Social Sciences after 1975.

SOURCE: National Norms for Entering College Freshmen Series 1966-1980, American Council on Education

TABLE 1-11

PROBABLE CAREER CHOICES OF COLLEGE FRESHMEN, BY SEX (WEIGHTED NATIONAL NORMS), SELECTED YEARS, 1966-1980

CAREER CHOICE	1966	1968	1969	1970	1971	1972	1973	1975	1976	1977	1978	1979	1980	1981	1982
MEN	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Total*	100.3	100.1	99.8	100.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.2	100,0	100.0
Businessman	18.6	17.5	16.9	17.4	16.1	15.4	19.0	17.2	20.9	22.4	23.3	17.8	22.0	21.6	20.9
Lawyer	6.7	5.5	5.6	6.2	6.8	7.1	6.7	5.4	5.5	5.5	5.3	5.0	4.8	4.5	4.7
Engineer	16.3	14.6	14.5	13.3	9.7	9.6	10.2	13.7	15.1	16.5	16.8		19.1	19.5	20.6
College Teacher	2.1	1.3	1.3	1.2	0.8	0.7	0.9	0.6	0.4	0.3	0.3	0.3	0.2	0.2	0.2
Educator, Elementary and Secondary	11.3	12.7	10.9	9.6	7.5	5.0	5.3	3.2	3.8	3.1	2.5	2.6	2.4	2.0	2.4
Physician or Dentist	7.4	5.6	4.9	5.9	6.4	7.9	8.1	6.6	6.3	5.3	5.7	5.2	5.3	4.9	5.0
Health Professional	3.2	2.9	2.8	3.0	4.1	4.6	5.4	5.2	4.3	4.0	4.1	2.5	3.5	3.1	2.9
Research Scientist	4.9	3.8	3.3	3.5	3.3	3.1	3.7	2.5	3.0	2.8	2.7	2.4	2.2	2.0	1.8
Farmer or Forester	3.2	2.9	3.0	3.1	4.8	4.8	4.9	5.7	4.6	4.9	3.7	2.0	3.4	4.3	3.3
Clergy or Religious Work.	1.2	1.1	1.4	1.3	1.0	1.0	1.0	1.0	0.9	0.8	0.8	0.7	0.7	0.7	9.7
Artist (incl. Performer)	4.6	4.2	4.3	5.1	4.9	5.2	2.7	1.0	5.5	5.5	3.4	3.8	3.8	3.6	3.4
Other Choice	15.8	16.7	19.3	19.0	21.7	21.3	32.2	24.5	21.3	21.4	22.1	31.5	23.9	24.8	17.2
Undecided	5.0	11.3	11.6	11.5	12.9	13.4	10.8	13.5	9.7	8.8	9.6	9.4	8.9	8.8	8.1
WOMEN															
Total*	99.8	99.9	100.1	100.2	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.1	99.8	100.0
Businesswoman	3.3	3.3	3.6	4.2	4.4	4.8	13.4	10.0	11.6	13.8	20.4	15.0	21.8	22.0	22.8
Lawyer	0.7	0.6	0.8	1.0	1.4	2.0	2.5	2.5	3.0	3.4	3.4	3.4	3.5	3.4	3.9
Engineer	0.2	0.2	0.3	0.4	0.2	0.3	0.7	1.1	1.5	1.5	2.2	2.3	2.9	2.9	3.6
College Teacher	1.5	0.9	0.8	0.9	0.6	0.6	1.0	0.6	0.3	0.3	0.3	0.2	0.2	0.2	0.2
Educator, Elementary and Secondary	34.1	37.5	36.5	31.0	24.8	19.5	21.0	10.3	12.5	11.4	10.1	10.5	9.3	8.8	7.6
Physician or Dentist	1.7	1.3	1.3	1.5	2.0	2.8	3.4	3.3	3.3	3.0	3.4	3.5	3.6	3.4	3.6
Health Professional	6.6	5.7	6.0	6.4	8.8	10.4	11.6	12.8	10.8	10.5	11.1	10.0	10.2	9.9	9.5
Nurse	5.3	6.1	6.0	8.7	8.6	9.8	9.2	9.9	9.1	8.8	7.7	7.0	7.2	7.3	7.7
Research Scientist	1.9	1.7	1.4	1.6	1.5	1.5	2.4	1.5	1.8	1.6	1.7	1.3	1.3	1.2	1.2
Farmer or Forester	0.2	0.1	0.2	0.4	0.7	0.7	1 0	1.5	1.4	1.5	1.3	0.5	1.1	1.3	0.9
Clergy or Religious Work.	0.8	0.2	0.3	0.2	0.2	0.2	0.4	0.4	0.2	0.2	0.2	0.1	0.1	0.1	8.0
Artist (incl. Performer)	8.9	7.8	7.6	7.6	7.2	8.0	4.5	6.5	8.2	8.1	4.3	4.4	4.3	4.2	4.0
Other Choice	31.0	23.7	24.3	24.5	26.1	24.9	17.3	25.9	25.4	25.2	22.3	30.4	23.3	23.8	19.8
Undecided	3.6	10.8	11.0	11.8	13.5	14.4	11.6	13.8	10.9	10.7	11.6	11.4	11.3	11.3	10.8

* Totals may differ from 100.0 because of rounding.

SOURCE: 1980 Census of Population, Supplementary Report May 1981, U.S. Department of Commerce; Fall Enrollment in Higher Education, 1980 (Unpublished), National Center for Education Statistics; The American Freshman, National Norms for 1981, ACE/UCLA Cooperative Research Program

TABLE 1-12

MINORITIES IN VARIOUS U. S. POPULATION GROUPS

	U.S. Population 1980		% of 1981 Freshmen Higher Ed.		Percent of Full-Time Enrollment, Fall 1980			
	No. in Thousands	% of Total	Men	Women	University	4-Year Colleges	2-Year Colleges	All Higher Education
TOTAL U. S.	226,505	100.0	100.0	100.0	100.0	100.0	100.0	100.0
White	188,341	83.2	89.5	87.6	85.5	81.3	78.7	81.3
Black	26,488	11.7	7.5	9.6	5.4	10.2	10.4	9.2
Hispanic	14,606	6.5	1.5	1.5	2.1	3.3	5.6	3.9
Indian/Alaskan Native	1,418	0.6	1.1	1.0	0.5	0.5	1.0	0.7
Asian/Pacific Islander	3,501	1.6	1.2	1.0	2.4	2.0	2.8	2.4
Other Minority	6,757	3.0	1.*	1.2				

* Non-Hispanic

Note: Except for Data on Full-Time Enrollment, Fall 1978, persons of Spanish origin are also included in racial groups.

SOURCE: Fall Enrollment in Higher Education, Fall 1980, National Center for Education Statistics, Unpublished

TABLE 1-13

PERCENT OF FULL-TIME ENROLLMENT, FALL 1980

	Undergraduate			Graduate		
	Total	Men	Women	Total	Men	Women
TOTAL U.S.	**100.0**	**50.6**	**49.4**	**100.0**	**58.0**	**42.0**
White (Non-Hispanic)	82.1	40.7	38.9	91.7	41.8	33.4
Black	10.0	4.3	5.7	5.0	2.1	2.9
Hispanic	5.1	2.4	2.7	2.6	1.4	1.2
Indian/Alaskan Native	0.6	0.3	0.3	0.4	0.2	0.2
Asian/Pacific Islander	2.2	1.2	1.0	2.6	1.6	1.0

SOURCE: Digest of Education Statistics, 1982, National Center for Education Statistics, NCES 82-407

TABLE 1-14

TOTAL ENROLLMENT[1] IN HIGHER EDUCATION BY RACIAL/ETHNIC CATEGORY, SEX, AND CONTROL, FALL 1978 AND 1980

Racial/ethnic category and sex	1978			1980			Percent change, 1978 to 1980		
	Total	Public	Private	Total	Public	Private	Total	Public	Private
1	2	3	4	5	6	7	8	9	10
Total	11,230,848	8,769,742	2,461,106	12,087,625	9,456,423	2,631,202	7.6	7.8	6.9
Men	5,621,402	4,321,505	1,299,897	5,868,738	4,521,632	1,347,106	4.4	4.6	3.6
Women	5,609,446	4,448,237	1,161,209	6,218,887	4,934,791	1,284,096	10.9	10.9	10.6
American Indian/Alaskan Native	77,874	68,449	9,425	85,798	74,224	11,574	10.2	8.4	22.8
Men	36,930	32,437	4,393	38,968	33,417	5,551	5.8	3.0	26.4
Women	41,044	36,012	5,032	46,830	40,807	6,023	14.1	13.3	19.7
Asian or Pacific Islander	235,064	195,401	39,663	286,408	239,710	46,698	21.8	22.7	17.7
Men	126,318	103,494	22,824	151,260	124,771	26,489	19.7	20.6	16.1
Women	108,746	91,907	16,839	135,148	114,939	20,209	24.3	25.1	20.0
Black, non-Hispanic	1,054,325	839,520	214,805	1,106,445	876,070	230,375	4.9	4.4	7.2
Men	453,239	357,908	95,331	463,590	365,296	98,294	2.3	2.1	3.1
Women	601,086	481,612	119,474	642,855	510,774	132,081	6.9	6.1	10.6
Hispanic	417,271	362,532	54,739	471,686	406,150	65,536	13.0	12.0	19.7
Men	212,524	184,239	28,285	231,590	198,652	32,938	9.0	7.8	16.5
Women	204,747	178,293	26,454	240,096	207,498	32,598	17.3	16.4	23.2
White, non-Hispanic	9,193,733	7,136,058	2,057,675	9,831,493	7,656,094	2,175,399	6.9	7.3	5.7
Men	4,612,966	3,523,016	1,089,950	4,771,921	3,658,136	1,113,785	3.4	3.8	2.2
Women	4,580,767	3,613,042	967,725	5,059,572	3,997,958	1,061,614	10.5	10.7	9.7
Nonresident alien	252,581	167,485	84,799	305,795	204,175	101,620	21.1	21.7	19.8
Men	179,525	120,114	59,114	211,409	141,360	70,049	17.8	17.4	18.5
Women	73,056	47,371	25,685	94,386	62,815	31,571	29.2	32.6	22.9

[1]Excludes those students whose racial/ethnic category was not reported.

TABLE 1-15

TOTAL ENROLLMENT[1] IN INSTITUTIONS OF HIGHER EDUCATION, BY RACIAL/ETHNIC CATEGORY AND BY TYPE AND CONTROL, FALL 1980

Type and control of institution	Total enrollment	Racial/ethnic category					Nonresident alien
		American Indian/ Alaskan Native	Asian or Pacific Islander	Black, non-Hispanic	Hispanic	White, non-Hispanic	
1	2	3	4	5	6	7	8
All institutions	**12,087,625**	**85,798**	**286,408**	**1,106,445**	**471,686**	**9,831,493**	**305,795**
Universities	2,902,014	14,157	68,280	156,955	61,582	2,482,556	118,484
Other 4-year institutions	4,664,204	24,647	93,779	477,039	155,020	3,790,467	123,252
2-year institutions	4,521,407	46,994	124,349	472,451	255,084	3,558,470	64,059
Public institutions	9,456,423	74,224	239,710	876,070	406,150	7,656,094	204,175
Universities	2,154,283	10,121	48,782	110,533	41,220	1,866,896	76,731
Other 4-year institutions	2,973,358	18,921	68,393	327,644	115,174	2,376,121	67,105
2-year institutions	4,328,782	45,182	122,535	437,893	249,756	3,413,077	60,339
Private institutions	2,631,202	11,574	46,698	230,375	65,536	2,175,399	101,620
Universities	747,731	4,036	19,498	46,422	20,362	615,660	41,753
Other 4-year institutions	1,690,846	5,726	25,386	149,395	39,846	1,414,346	56,147
2-year institutions	192,625	1,812	1,814	34,558	5,328	145,393	3,720

[1]Excludes those students whose racial/ethnic category was not reported.

SOURCE: Fall Enrollment in Higher Education, 1980, National Center for Education Statistics, NCES 82-323

TABLE 1-16

FULL-TIME ENROLLMENT IN SELECTED FIELDS BY SEX AND ETHNICITY, FALL 1980

	Total Enrollment		Agriculture/ Nat. Resources		Architecture/ Environ. Design		Biological Sciences		Business & Management		Physical Sciences		Engineering	
ENROLLMENT	Total	Women	Total	Women	Total	Women	Total	Women	Total	Women	Total	Women	Total	Women
Undergraduate														
ALL STUDENTS	6,297,902	3,113,359	106,086	33,587	51,915	14,760	198,621	95,118	1,016,265	444,137	112,726	31,936	434,896	55,671
White, Non-Hispanic	5,012,525	2,490,617	96,392	30,807	42,842	12,234	157,237	72,820	812,843	339,488	96,782	26,527	343,812	42,915
Black	631,004	361,044	2,508	869	2,418	703	15,105	9,099	105,344	59,410	5,311	2,245	23,503	5,647
Asian/Pacif. Isl.	138,527	64,623	1,174	428	1,491	479	6,501	3,048	16,559	8,615	2,748	900	15,650	2,436
American Indian	38,631	20,278	648	195	167	48	1,017	541	4,494	2,311	475	155	1,573	240
Hispanic	320,108	170,607	2,919	883	2,220	582	14,021	7,716	52,696	26,872	3,515	1,257	15,428	2,126
Non-Res. Alien	157,067	46,226	2,445	405	2,777	714	4,757	1,900	24,329	7,441	3,895	852	34,930	2,303
Graduate														
ALL STUDENTS	445,839	187,278	11,205	2,773	7,778	2,649	25,100	9,208	63,788	19,123	25,645	4,685	34,820	3,060
White, Non-Hispanic	335,323	149,038	7,934	2,209	5,830	2,066	20,698	7,500	49,151	15,229	19,034	3,516	18,042	2,037
Black	22,173	12,731	170	41	311	141	701	366	2,922	1,230	412	124	408	76
Asian/Pacif. Isl.	11,439	4,397	240	71	227	83	822	349	1,834	591	689	123	1,636	177
American Indian	1,571	780	23	6	19	10	63	19	177	59	43	11	29	4
Hispanic	11,561	5,523	160	31	167	46	372	149	1,156	342	331	87	423	46
Non-Res. Alien	63,581	14,711	2,678	415	1,224	303	2,444	825	8,548	1,672	5,096	784	14,282	720
						PERCENTAGES								
Undergraduate														
ALL STUDENTS	100.0	49.4	100.0	31.7	100.0	28.4	100.0	47.9	100.0	43.7	100.0	28.3	100.0	12.8
White, Non-Hispanic	79.6	48.9	90.9	32.0	82.5	28.6	79.2	46.3	80.0	41.8	85.9	27.4	79.1	12.5
Black	10.0	57.2	2.4	34.7	4.7	29.1	7.6	60.2	10.4	56.4	4.7	42.3	5.4	24.0
Asian/Pacif. Isl.	2.2	46.7	1.1	36.5	2.9	32.1	3.3	46.9	1.6	52.0	2.4	32.8	3.6	15.6
American Indian	0.6	52.5	0.6	30.1	0.3	28.7	0.5	53.2	0.4	51.4	0.4	32.6	0.4	15.3
Hispanic	5.1	53.3	2.8	30.3	4.3	26.2	7.1	55.0	5.2	51.0	3.1	35.8	3.5	13.8
Non-Res. Alien	2.5	29.4	2.3	16.6	5.3	25.7	2.4	39.9	2.4	30.6	3.5	21.9	8.0	6.6
Graduate														
ALL STUDENTS	100.0	42.0	100.0	24.7	100.0	34.1	100.0	36.7	100.0	30.0	100.0	18.3	100.0	8.8
White, Non-Hispanic	75.2	44.4	70.8	27.8	75.0	35.4	82.5	36.2	77.1	31.0	74.2	18.5	51.8	11.3
Black	5.0	57.4	1.5	24.1	4.0	45.3	2.8	52.2	4.6	42.1	1.6	30.1	1.2	18.6
Asian/Pacific Isl.	2.6	38.4	2.1	29.6	2.9	36.6	3.3	42.5	2.9	32.2	2.7	17.9	4.7	10.8
American Indian	0.4	49.6	0.2	26.1	0.2	52.6	0.3	30.2	0.3	33.3	0.2	25.6	0.1	13.8
Hispanic	2.6	47.8	1.4	19.4	2.1	27.5	1.5	40.1	1.8	29.6	1.3	26.3	1.2	10.9
Non-Res. Alien	14.3	23.1	23.9	15.5	15.7	24.8	9.7	33.8	13.4	19.6	19.9	15.4	41.0	5.0

SOURCE: MONTHLY LABOR REVIEW, September 1982, Bureau of Labor Statistics

TABLE 1-17

ENROLLMENT STATUS OF PERSONS 16-24 YEARS OLD BY SEX AND RACE/ETHNICITY, 1980 AND 1981

ENROLLMENT STATUS	1980				1981			
	TOTAL	WHITE	BLACK	HISPANIC	TOTAL	WHITE	BLACK	HISPANIC
TOTAL	37,103	31,345	4,892	2,624	36,946	31,110	4,933	2,686
ENROLLED	15,713	13,242	2,028	920	15,909	13,312	2,083	985
Men	7,997	6,821	952	455	8,150	6,853	1,010	517
Women	7,716	6,421	1,076	465	7,759	6,459	1,072	467
16 to 19 Years	11,126	9,270	1,566	705	11,208	9,285	1,598	753
20 to 24 Years	4,587	3,972	462	215	4,700	4,027	485	232
High School	8,050	6,566	1,282	579	8,108	6,572	1,303	627
College	7,664	6,678	747	341	7,800	6,740	780	358
Full-Time Students	6,396	5,567	641	255	6,503	5,613	661	288
Part-Time Students	1,268	1,109	106	86	1,297	1,127	119	69
NOT ENROLLED	21,390	18,103	2,864	1,704	21,037	17,798	2,850	1,701
Men	10,245	8,714	1,322	840	10,018	8,562	1,292	816
Women	11,145	9,389	1,542	864	11,019	9,236	1,558	885
School Completed								
High School								
Less Than 4 Years	5,230	4,166	955	922	5,142	4,107	913	891
16 to 19 Years	2,025	4,511	723	487	1,921	4,132	684	486
20 to 24 Years	3,205	13,592	2,141	1,217	3,222	13,663	2,165	1,215
4 Years Only	11,654	10,025	1,431	589	11,451	9,778	1,501	634
College								
1 to 3 Years	3,038	2,588	372	155	2,926	2,511	348	141
4 Years or More	1,467	1,324	106	38	1,517	1,402	88	36

SOURCE: Graduate Science Education, Student Support and Postdoctorals, Detailed Statistical Tables, Fall 1980 (NSF 81-330) and Fall 1981 (in press), National Science Foundation

TABLE 1-18

TOTAL GRADUATE ENROLLMENTS IN SCIENCE AND ENGINEERING BY LEVEL OF DEPARTMENT, 1980 AND 1981

FIELD	1980						1981					
	ALL GRAD DEPTS.		PH.D. DEPTS.		MASTER'S DEPTS.		ALL GRAD DEPTS.		PH.D. DEPTS.		MASTER'S DEPTS.	
	Total	% W	Total	% W	Total	% W	Total	% W	Total	% W	Total	% W
Total S/E Fields	383,210	34.9	333,658	33.6	49,552	43.6	392,034	36.3	340,203	34.8	51,831	46.5
Engineering	77,174	9.0	72,271	9.1	4,903	7.3	89,977	10.2	76,986	10.3	5,991	9.5
Physical Science	27,063	17.1	25,443	16.6	1,620	25.0	27,351	18.4	25,808	17.8	1,543	30.6
Environ. Science	13,680	22.8	12,349	22.6	1,331	25.1	14,099	24.3	12,643	23.9	1,456	28.3
Math Science	28,873	24.9	24,951	23.8	3,922	31.4	32,262	26.9	27,060	25.6	5,202	33.3
Agric. Science	12,365	23.0	11,644	23.4	721	72.1	12,071	22.6	11,332	22.7	739	71.2
Biological Sci.	47,643	38.8	42,055	38.2	5,588	42.9	46,420	40.2	41,292	39.6	5,128	45.3
Health Science	42,693	71.0	36,953	70.3	5,740	75.2	44,990	72.6	38,582	71.5	6,408	78.8
Psychology	40,544	53.2	29,339	51.6	11,205	62.0	40,756	56.0	28,957	53.6	11,799	62.1
Social Science	93,175	41.7	78,653	41.7	14,522	41.6	91,108	43.9	77,543	43.7	13,565	44.9

SOURCE: Women and Minorities in Science and Engineering, National Science Foundation, 1982

TABLE 1-19

GRADUATE RECORD EXAMINATION (GRE) SCORES BY SEX, RACE AND UNDERGRADUATE MAJOR, 1978-79

Sex and race	Physical science	Mathematical science	Engineering	Biological science	Behavioral science	Social science
Men						
Verbal	514	510	465	485	506	452
Quantitative	640	682	661	577	522	501
Analytical	555	568	525	518	509	473
Women						
Verbal	534	498	497	500	509	457
Quantitative	600	636	603	528	479	446
Analytical	564	565	534	526	513	469
White						
Verbal	541	537	527	521	528	484
Quantitative	639	682	675	569	514	496
Analytical	581	602	587	553	539	506
Black						
Verbal	391	364	403	358	386	343
Quantitative	462	486	521	381	366	337
Analytical	406	401	437	359	371	333
Asian						
Verbal	498	478	469	494	503	463
Quantitative	658	660	675	596	528	494
Analytical	548	549	533	537	510	464

Source: Cheryl L. Wild, A Summary of Data Collected From Graduate Record Examination Test-Takers During 1978/79, Data Summary Report #4 (Princeton, N.J.: Educational Testing Service, March 1980), pp. 68-70, 76-78.

TABLE 1-20

GRADUATE RECORD EXAMINATION (GRE) SCORES BY UNDERGRADUATE MAJOR AND HISPANIC ORIGIN, 1978-79

Undergraduate major	Mexican American			Puerto Rican			Latin American		
	Verbal	Quantitative	Analytical	Verbal	Quantitative	Analytical	Verbal	Quantitative	Analytical
Physical science	509	600	516	418	532	433	509	592	524
Mathematical science	420	595	467	375	550	412	468	626	530
Engineering	434	595	487	390	583	439	476	624	520
Biological science	467	568	473	398	550	401	473	509	486
Behavioral science	440	527	435	399	387	362	481	490	473
Social science	409	413	404	363	378	362	465	429	448

Source: Cheryl L. Wild, A Summary of Data Collected From Graduate Record Examination Test-Takers During 1978-79, Data Summary Report #4 (Princeton, N.J.: Educational Testing Service, March 1980), pp. 76-78.

SOURCE: Graduate Science Education Student Support and Postdoctorals, Fall 1981, National Science Foundation, In press

TABLE 1-21

FULL TIME SCIENCE & ENGINEERING GRADUATE STUDENTS IN ALL INSTITUTIONS AND IN DOCTORATE GRANTING INSTITUTIONS BY FIELD, CITIZENSHIP AND SEX, 1981

FIELD	ALL INSTITUTIONS					DOCTORATE-GRANTING INSTITUTIONS				
	TOTAL	CITIZENSHIP		SEX		TOTAL	CITIZENSHIP		SEX	
		U.S.	FOREIGN	MEN	WOMEN		U.S.	FOREIGN	MEN	WOMEN
TOTAL, ALL FIELDS	253,428	198,425	55,003	165,222	88,206	234,529	181,870	52,659	155,371	79,158
ENGINEERING	46,661	26,775	19,886	41,782	4,879	45,366	26,023	19,343	40,594	4,772
AEROSPACE	1,449	848	601	1,398	51	1,446	848	598	1,395	51
AGRICULTURAL	677	376	301	634	43	677	376	301	634	43
BIOMEDICAL	862	707	155	712	150	848	694	154	699	149
CHEMICAL	5,143	2,899	2,244	4,547	596	5,083	2,868	2,215	4,493	590
CIVIL	7,320	3,965	3,355	6,592	728	7,093	3,829	3,264	6,382	711
ELECTRICAL	10,401	5,625	4,776	9,692	709	10,145	5,503	4,642	9,449	696
ENGINEERING SCIENCE	1,232	856	376	1,118	114	1,216	844	372	1,103	113
INDUSTRIAL	3,947	2,271	1,676	3,210	737	3,737	2,155	1,582	3,025	712
MECHANICAL	6,468	3,422	3,046	6,109	359	6,383	3,387	2,996	6,028	355
METALLURGICAL/MATERIALS	2,440	1,333	1,107	2,156	284	2,422	1,321	1,101	2,141	281
MINING	470	303	167	410	60	453	291	162	395	58
NUCLEAR	1,056	616	440	982	74	1,056	616	440	982	74
PETROLEUM	393	198	195	359	34	390	198	192	356	34
ENGINEERING, N.E.C.	4,803	3,356	1,447	3,863	940	4,417	3,093	1,324	3,512	905
PHYSICAL SCIENCES	23,354	17,105	6,249	19,318	4,036	22,634	16,578	6,056	18,790	3,844
ASTRONOMY	565	472	93	482	83	565	472	93	482	83
CHEMISTRY	13,735	10,527	3,208	10,718	3,017	13,170	10,114	3,056	10,323	2,847
PHYSICS	8,962	6,025	2,937	8,058	904	8,840	5,940	2,900	7,949	891
PHYSICAL SCIENCES, N.E.C.	92	81	11	60	32	59	52	7	36	23
ENVIRONMENTAL SCIENCES	10,880	9,384	1,496	8,293	2,587	10,247	8,807	1,440	7,850	2,397
ATMOSPHERIC SCIENCES	772	593	179	659	113	766	587	179	653	113
GEOSCIENCES	6,945	6,072	873	5,341	1,604	6,761	5,896	865	5,204	1,557
OCEANOGRAPHY	1,637	1,387	250	1,213	424	1,604	1,355	249	1,180	424
ENVIRONMENTAL SCIENCES, N.E.C.	1,526	1,332	194	1,080	446	1,116	969	147	813	303
MATHEMATICAL/COMPUTER SCIENCES	17,726	11,511	6,215	13,412	4,314	16,124	10,404	5,720	12,305	3,819
COMPUTER SCIENCE	7,737	5,090	2,647	5,928	1,809	6,587	4,327	2,262	5,098	1,491
MATHEMATICS AND APPLIED MATHEMATICS	8,460	5,577	2,883	6,356	2,104	8,010	5,237	2,773	6,082	1,928
STATISTICS	1,529	844	685	1,128	401	1,525	840	685	1,125	400
LIFE SCIENCES	72,536	63,108	9,428	38,815	33,721	67,517	58,459	9,058	36,562	30,955
AGRICULTURAL SCIENCES	10,048	7,672	2,376	7,708	2,340	9,623	7,335	2,288	7,387	2,236
BIOLOGICAL SCIENCES	37,138	32,425	4,713	23,049	14,089	34,854	30,366	4,488	21,696	13,158
ANATOMY	958	882	76	614	344	958	882	76	614	344
BIOCHEMISTRY	3,619	3,054	565	2,427	1,192	3,600	3,040	560	2,427	1,173
BIOLOGY	9,566	8,689	877	6,080	3,486	7,784	7,061	723	4,921	2,863
BIOMETRY/EPIDEMIOLOGY	1,009	850	159	574	435	1,009	850	159	574	435
BIOPHYSICS	487	412	75	354	133	487	412	75	354	133
BOTANY	2,992	2,461	531	1,971	1,021	2,979	2,448	531	1,964	1,015
CELL BIOLOGY	854	777	77	550	304	854	777	77	550	304
ECOLOGY	925	852	73	628	297	917	845	72	625	292
ENTOMOLOGY/PARASITOLOGY	1,456	1,197	259	1,153	303	1,456	1,197	259	1,153	303
GENETICS	858	762	96	442	416	811	717	94	439	372
MICROBIOLOGY	3,392	3,020	372	1,955	1,437	3,341	2,978	363	1,943	1,398
NUTRITION	3,158	2,331	827	1,199	1,959	3,064	2,271	793	1,159	1,905
PATHOLOGY	1,193	1,029	164	711	482	998	848	150	627	371
PHARMACOLOGY	1,891	1,694	197	1,255	636	1,890	1,693	197	1,254	636
PHYSIOLOGY	1,891	1,717	174	1,275	616	1,891	1,717	174	1,275	616
ZOOLOGY	2,268	2,132	136	1,502	766	2,247	2,113	134	1,487	760
BIOSCIENCES, N.E.C.	621	566	55	359	262	568	517	51	330	238
HEALTH SCIENCES	25,350	23,011	2,339	8,058	17,292	23,040	20,758	2,282	7,479	15,561
ANESTHESIOLOGY	16	15	1	4	12	16	15	1	4	12
CANCER/ONCOLOGY	44	38	6	44	0	44	38	6	44	0
CARDIOLOGY	30	29	1	17	13	5	4	1	5	0
GENETICS	1,017	767	250	795	222	1,017	767	250	795	222
ENDOCRINOLOGY	46	43	3	21	25	46	43	3	21	25
GASTROENTEROLOGY	3	2	1	3	0	3	2	1	3	0
HEMATOLOGY	9	9	0	2	7	9	9	0	2	7
IMMUNOLOGY	330	305	25	225	105	316	292	24	219	97
MEDICINE	7,329	7,102	227	369	6,960	6,927	6,705	222	341	6,586
OBSTETRICS/GYNECOLOGY	10	8	2	4	6	10	8	2	4	6
OPHTHALMOLOGY	19	16	3	15	4	19	16	3	15	4
OTOLARYNGOLOGY	15	15	0	11	4	15	15	0	11	4
PEDIATRICS	119	111	8	28	91	119	111	8	28	91
PHARMACY	1,693	1,152	541	1,184	509	1,677	1,139	538	1,168	509
PREVENTIVE MEDICINE	4,434	3,865	569	2,109	2,325	4,404	3,837	567	2,103	2,301
PSYCHIATRY	57	57	0	28	29	57	57	0	28	29
PUBLIC HEALTH	9	9	0	5	4	9	9	0	5	4
RADIOLOGY	235	200	35	186	49	235	200	35	186	49
SURGERY	5,474	5,230	244	854	4,620	4,511	4,282	229	745	3,766
VETERINARY MEDICINE	69	64	5	60	9	69	64	5	60	9
OTHER HEALTH FIELDS	685	463	222	446	239	663	452	211	431	232
HEALTH SCIENCES, N.E.C.	296	260	36	161	135	234	201	33	140	94
PSYCHOLOGY	3,411	3,251	160	1,487	1,924	2,635	2,492	143	1,121	1,514
SOCIAL SCIENCES	26,697	25,695	1,002	12,058	14,639	21,470	20,639	831	10,146	11,324
AGRICULTURAL ECONOMICS	55,574	44,847	10,727	31,544	24,030	51,171	40,960	10,211	29,124	22,047
ANTHROPOLOGY	2,037	1,267	770	1,599	438	2,014	1,257	757	1,581	433
ECONOMICS	4,324	3,896	428	1,985	2,339	4,245	3,823	422	1,943	2,302
FORESTRY AGRICULTURAL	9,318	5,658	3,660	7,283	2,035	9,020	5,510	3,510	7,053	1,967
GEOGRAPHY	2,289	1,912	377	1,577	712	2,101	1,749	352	1,443	658
HISTORY AND PHILOSOPHY OF SCIENCE	217	187	30	142	75	217	187	30	142	75
LINGUISTICS	2,181	1,448	733	979	1,202	2,167	1,435	732	972	1,195
POLITICAL SCIENCE	14,427	11,852	2,575	9,599	4,828	12,813	10,400	2,413	8,592	4,221
SOCIOLOGY	5,582	4,513	1,069	2,800	2,782	5,299	4,257	1,042	2,670	2,629
SOCIOLOGY/ANTHROPOLOGY	577	483	94	282	295	526	435	91	260	266
SOCIAL SCIENCES, N.E.C.	14,622	13,631	991	5,298	9,324	12,769	11,907	862	4,468	8,301

SOURCE: Graduate Science Education Student Support and Postdoctorals, Fall 1981, National Science Foundation, in press

TABLE 1-22

FULL TIME SCIENCE & ENGINEERING GRADUATE STUDENTS IN ALL INSTITUTIONS, BY FIELD AND RACE/ETHNICITY, 1981

FIELD	TOTAL	U.S. CITIZENS					FOREIGN, OTHER, OR UNKNOWN
		BLACK NON-HISPANIC	AMERICAN INDIAN/ ALASKAN NATIVE	ASIAN/ PACIFIC ISLANDER	HISPANIC	WHITE NON-HISPANIC	
TOTAL, ALL FIELDS	253,428	6,288	535	4,900	4,556	140,499	96,670
ENGINEERING	46,661	431	67	1,108	478	18,404	26,173
AEROSPACE	1,449	15	0	26	16	494	898
AGRICULTURAL	677	2	14	11	7	306	337
BIOMEDICAL	862	4	1	15	8	499	335
CHEMICAL	5,143	44	6	134	41	2,033	2,885
CIVIL	7,320	56	2	195	90	3,023	3,954
ELECTRICAL	10,401	111	29	275	112	3,553	6,321
ENGINEERING SCIENCE	1,232	10	0	13	6	589	614
INDUSTRIAL	3,947	65	2	59	65	1,545	2,211
MECHANICAL	6,468	36	3	114	58	2,104	4,153
METALLURGICAL/MATERIALS	2,440	15	1	76	18	1,053	1,277
MINING	470	3	0	10	3	260	194
NUCLEAR	1,056	11	3	26	6	559	451
PETROLEUM	393	2	0	10	3	151	227
ENGINEERING, N.E.C.	4,803	57	6	144	45	2,235	2,316
PHYSICAL SCIENCES	23,354	325	15	499	326	13,399	8,790
ASTRONOMY	565	3	1	3	4	403	151
CHEMISTRY	13,735	237	11	346	218	8,088	4,835
PHYSICS	8,962	84	3	147	103	4,856	3,769
PHYSICAL SCIENCES, N.E.C.	92	1	0	3	1	52	35
ENVIRONMENTAL SCIENCES	10,880	72	11	92	134	6,961	3,610
ATMOSPHERIC SCIENCES	772	3	0	8	20	536	205
GEOSCIENCES	6,945	32	7	59	51	4,471	2,325
OCEANOGRAPHY	1,637	6	1	15	53	1,075	487
ENVIRONMENTAL SCIENCES, N.E.C.	1,526	31	3	10	10	879	593
MATHEMATICAL/COMPUTER SCIENCES	17,726	231	8	508	215	8,182	8,582
COMPUTER SCIENCE	7,737	93	3	266	54	3,434	3,887
MATHEMATICS AND APPLIED MATHEMATICS	8,460	130	3	219	149	4,076	3,883
STATISTICS	1,529	8	2	23	12	672	812
LIFE SCIENCES	72,536	1,498	130	1,383	1,030	47,170	21,325
AGRICULTURAL SCIENCES	10,048	91	8	97	134	6,225	3,493
BIOLOGICAL SCIENCES	37,138	637	32	785	496	24,823	10,365
ANATOMY	958	16	2	21	8	691	220
BIOCHEMISTRY	3,619	50	0	115	34	2,517	903
BIOLOGY	9,566	219	13	144	264	6,345	2,581
BIOMETRY/EPIDEMIOLOGY	1,009	29	3	23	3	439	512
BIOPHYSICS	487	6	0	9	3	251	218
BOTANY	2,992	26	2	42	23	2,007	892
CELL BIOLOGY	854	6	0	21	14	553	260
ECOLOGY	925	2	0	7	6	697	213
ENTOMOLOGY/PARASITOLOGY	1,456	13	0	32	10	1,075	326
GENETICS	858	17	0	31	10	585	215
MICROBIOLOGY	3,392	60	3	94	28	2,205	1,002
NUTRITION	3,158	52	2	58	31	1,974	1,041
PATHOLOGY	1,193	19	2	30	8	675	459
PHARMACOLOGY	1,691	31	1	61	16	1,359	423
PHYSIOLOGY	1,891	29	0	40	20	1,309	493
ZOOLOGY	2,268	47	4	38	9	1,728	442
BIOSCIENCES, N.E.C.	621	15	0	19	9	413	165
HEALTH SCIENCES	25,350	770	90	501	400	16,122	7,467
ANESTHESIOLOGY	16	0	0	1	0	13	2
CANCER/ONCOLOGY	44	0	0	0	0	0	44
CARDIOLOGY	30	0	0	0	0	26	4
DENTISTRY	1,017	10	1	19	14	597	376
ENDOCRINOLOGY	44	3	0	2	0	31	10
GASTROENTEROLOGY	3	0	0	0	0	0	3
HEMATOLOGY	9	0	0	0	0	8	1
NEUROLOGY	330	1	0	7	4	253	65
NURSING	7,329	170	9	104	64	4,713	2,269
OBSTETRICS/GYNECOLOGY	10	0	0	2	0	4	4
OPHTHALMOLOGY	19	0	0	1	0	10	8
OTORHINOLARYNGOLOGY	15	0	0	0	0	11	4
PEDIATRICS	119	8	0	1	1	71	38
PHARMACEUTICAL SCIENCES	1,693	18	0	42	27	878	728
PREVENTIVE MEDICINE/ COMMUNITY HEALTH	4,434	191	49	201	101	2,741	1,151
PSYCHIATRY	57	3	0	2	1	50	1
PULMONARY DISEASE	9	1	0	0	0	6	2
RADIOLOGY	235	5	0	12	2	146	70
SPEECH PATHOLOGY/AUDIOLOGY	5,474	220	12	51	95	3,884	1,212
SURGERY	69	0	0	1	0	43	25
VETERINARY SCIENCES	685	23	0	12	12	402	236
CLINICAL MEDICINE, N.E.C.	296	11	1	12	2	178	92
HEALTH RELATED, N.E.C.	3,411	106	18	31	77	2,057	1,122
PSYCHOLOGY	26,697	978	48	328	955	15,884	8,504
SOCIAL SCIENCES	55,574	2,753	236	982	1,418	30,499	19,686
AGRICULTURAL ECONOMICS	2,037	32	2	19	26	1,100	858
ANTHROPOLOGY	4,324	63	22	41	72	2,844	1,282
ECONOMICS (EXCEPT AGRICULTURAL)	9,318	200	9	130	139	4,020	4,820
GEOGRAPHY	2,289	25	10	17	21	1,524	692
HISTORY AND PHILOSOPHY OF SCIENCE	217	3	1	2	1	152	58
LINGUISTICS	2,181	28	2	27	25	1,053	1,041
POLITICAL SCIENCE	14,427	919	39	194	363	6,974	5,936
SOCIOLOGY	5,582	370	35	104	186	3,089	1,848
SOCIOLOGY/ANTHROPOLOGY	577	48	0	8	11	344	166
SOCIAL SCIENCES, N.E.C.	14,622	1,115	111	438	574	9,399	2,985

SOURCE: Graduate Science Education Student Support and Postdoctorals, Fall 1981, National Science Foundation, In press

TABLE 1-23

FULL TIME SCIENCE & ENGINEERING GRADUATE STUDENTS IN DOCTORATE GRANTING INSTITUTIONS BY FIELD AND RACE/ETHNICITY, 1981

FIELD	TOTAL	U.S. CITIZENS					FOREIGN, OTHER, OR UNKNOWN
		BLACK NON-HISPANIC	AMERICAN INDIAN/ ALASKAN NATIVE	ASIAN/ PACIFIC ISLANDER	HISPANIC	WHITE NON-HISPANIC	
TOTAL, ALL FIELDS	234,529	5,351	470	4,568	4,181	132,101	87,858
ENGINEERING	45,366	406	67	1,058	470	18,096	25,269
AEROSPACE	1,446	15	0	26	16	494	895
AGRICULTURAL	677	2	14	11	7	306	337
BIOMEDICAL	848	4	1	15	8	499	321
CHEMICAL	5,083	44	6	129	41	2,014	2,849
CIVIL	7,093	53	2	173	86	2,953	3,826
ELECTRICAL	10,145	104	29	270	111	3,537	6,094
ENGINEERING SCIENCE	1,216	10	0	13	6	582	605
INDUSTRIAL	3,737	57	2	50	64	1,489	2,075
MECHANICAL	6,383	35	3	112	58	2,095	4,080
METALLURGICAL/MATERIALS	2,422	15	1	75	18	1,042	1,271
MINING	453	3	0	10	3	248	189
NUCLEAR	1,056	11	3	26	6	559	451
PETROLEUM	390	2	0	10	3	151	224
ENGINEERING, N.E.C.	4,417	51	6	138	43	2,127	2,052
PHYSICAL SCIENCES	22,634	271	15	466	319	13,114	8,449
ASTRONOMY	565	3	1	3	4	403	151
CHEMISTRY	13,170	190	11	316	212	7,878	4,563
PHYSICS	8,840	78	3	145	102	4,799	3,713
PHYSICAL SCIENCES, N.E.C.	59	0	0	2	1	34	22
ENVIRONMENTAL SCIENCES	10,247	54	10	91	124	6,637	3,331
ATMOSPHERIC SCIENCES	766	3	0	8	20	530	205
GEOSCIENCES	6,761	31	7	59	47	4,365	2,252
OCEANOGRAPHY	1,604	6	1	15	53	1,074	455
ENVIRONMENTAL SCIENCES, N.E.C.	1,116	14	2	9	4	668	419
MATHEMATICAL/COMPUTER SCIENCES	16,124	179	6	428	195	7,722	7,594
COMPUTER SCIENCE	6,589	60	2	199	37	3,161	3,130
MATHEMATICS AND APPLIED MATHEMATICS	8,010	111	2	206	146	3,891	3,654
STATISTICS	1,525	8	2	23	12	670	810
LIFE SCIENCES	67,517	1,263	121	1,316	922	44,764	19,131
AGRICULTURAL SCIENCES	9,623	87	7	97	132	6,057	3,243
BIOLOGICAL SCIENCES	34,854	500	29	752	459	23,810	9,304
ANATOMY	958	16	2	21	8	691	220
BIOCHEMISTRY	3,600	50	0	115	34	2,517	884
BIOLOGY	7,784	92	10	118	234	5,522	1,808
BIOMETRY/EPIDEMIOLOGY	1,009	29	3	23	3	439	512
BIOPHYSICS	487	6	0	9	3	251	218
BOTANY	2,979	26	2	42	23	1,996	892
CELL BIOLOGY	854	6	0	21	14	553	260
ECOLOGY	917	2	0	7	6	691	211
ENTOMOLOGY/PARASITOLOGY	1,456	13	0	32	10	1,075	326
GENETICS	811	16	0	31	8	543	213
MICROBIOLOGY	3,341	60	3	88	26	2,176	988
NUTRITION	3,064	44	2	57	30	1,939	992
PATHOLOGY	998	19	2	30	8	675	264
PHARMACOLOGY	1,890	31	1	41	16	1,358	423
PHYSIOLOGY	1,891	29	0	40	20	1,309	493
ZOOLOGY	2,247	46	4	38	9	1,710	440
BIOSCIENCES, N.E.C.	568	15	0	19	7	367	160
HEALTH SCIENCES	23,040	676	85	467	331	14,897	6,584
ANESTHESIOLOGY	16	0	0	1	0	13	2
CANCER/ONCOLOGY	44	0	0	0	0	0	44
CARDIOLOGY	5	0	0	0	0	1	4
DENTISTRY	1,017	30	1	19	14	597	376
ENDOCRINOLOGY	46	3	0	2	0	31	10
GASTROENTEROLOGY	3	0	0	0	0	0	3
HEMATOLOGY	9	0	0	0	0	8	1
NEUROLOGY	316	1	0	7	4	240	64
NURSING	6,927	147	9	86	90	4,552	2,093
OBSTETRICS/GYNECOLOGY	10	0	0	2	0	4	4
OPHTHALMOLOGY	19	0	0	1	0	10	8
OTORHINOLARYNGOLOGY	15	0	0	0	0	11	4
PEDIATRICS	119	8	0	1	1	71	38
PHARMACEUTICAL SCIENCES	1,677	18	0	42	27	877	713
PREVENTIVE MEDICINE/ COMMUNITY HEALTH	4,404	191	49	201	101	2,735	1,127
PSYCHIATRY	57	3	0	2	1	50	1
PULMONARY DISEASE	9	1	0	0	0	6	2
RADIOLOGY	235	5	0	12	2	146	70
SPEECH PATHOLOGY/AUDIOLOGY	4,511	182	11	43	60	3,314	901
SURGERY	69	0	0	1	0	43	25
VETERINARY SCIENCES	663	14	0	12	9	401	225
CLINICAL MEDICINE, N.E.C.	234	4	0	4	1	147	76
HEALTH RELATED, N.E.C.	2,635	85	15	31	61	1,640	803
PSYCHOLOGY	21,470	784	33	291	875	12,940	6,547
SOCIAL SCIENCES	51,171	2,394	218	918	1,276	28,828	17,537
AGRICULTURAL ECONOMICS	2,014	26	2	19	26	1,096	845
ANTHROPOLOGY	4,245	62	21	41	70	2,810	1,241
ECONOMICS (EXCEPT AGRICULTURAL)	9,020	186	9	126	136	3,973	4,590
GEOGRAPHY	2,101	20	9	13	20	1,397	642
HISTORY AND PHILOSOPHY OF SCIENCE	217	3	1	2	1	152	58
LINGUISTICS	2,167	28	7	27	24	1,043	1,038
POLITICAL SCIENCE	12,813	789	36	176	329	6,489	5,000
SOCIOLOGY	5,299	258	35	99	176	2,977	1,752
SOCIOLOGY/ANTHROPOLOGY	526	48	0	8	11	330	129
SOCIAL SCIENCES, N.E.C.	12,769	974	98	407	487	8,561	2,242

SOURCE: Graduate Science Education Student Support and Postdoctorals, Fall 1981, National Science Foundation, In press

TABLE 1-24

FOREIGN FULL TIME SCIENCE & ENGINEERING GRADUATE STUDENTS IN DOCTORATE GRANTING INSTITUTIONS BY FIELD, 1974-77 AND 1979-81

FIELD	NUMBER							AVERAGE ANNUAL PERCENT CHANGE		
	1974	1975	1976	1977	1979	1980	1981	1974-80	1980-81	1974-81
TOTAL, ALL FIELDS	31,687	33,128	34,401	36,857	44,751	48,735	52,659	7.4	8.1	7.5
ENGINEERING	11,002	11,900	12,292	13,408	16,283	17,629	19,343	8.2	9.7	8.4
AEROSPACE	377	394	440	473	520	565	598	7.0	5.8	6.8
AGRICULTURAL	159	198	248	287	277	296	301	10.9	1.7	9.5
BIOMEDICAL	122	105	103	114	128	132	154	1.3	16.7	3.4
CHEMICAL	1,414	1,449	1,573	1,628	1,874	1,988	2,215	5.8	11.4	6.6
CIVIL	1,828	1,966	1,870	2,189	2,803	3,057	3,264	8.9	6.8	8.6
ELECTRICAL	2,411	2,597	2,719	3,012	3,758	4,182	4,642	9.6	11.0	9.8
ENGINEERING SCIENCE	327	322	301	359	313	362	372	1.7	2.8	1.9
INDUSTRIAL	897	1,163	1,078	1,236	1,411	1,439	1,582	8.2	9.9	8.4
MECHANICAL	1,628	1,707	1,804	1,868	2,400	2,593	2,996	8.1	15.5	9.1
METALLURGICAL/MATERIALS	682	710	728	762	1,015	1,096	1,101	8.2	.5	7.1
MINING	140	154	174	166	121	143	162	.4	13.3	2.1
NUCLEAR	299	400	384	387	463	459	440	7.4	-4.1	5.7
PETROLEUM	150	154	224	201	231	210	192	5.8	-8.6	3.6
ENGINEERING, N.E.C.	568	581	646	726	969	1,107	1,324	11.8	19.6	12.9
PHYSICAL SCIENCES	4,450	4,391	4,423	4,572	5,165	5,584	6,056	3.9	8.5	4.5
ASTRONOMY	57	67	68	70	75	84	93	6.7	10.7	7.2
CHEMISTRY	2,316	2,352	2,466	2,488	2,745	2,869	3,056	3.6	6.5	4.0
PHYSICS	2,065	1,966	1,884	2,004	2,340	2,623	2,900	4.1	10.6	5.0
PHYSICAL SCIENCES, N.E.C.	12	6	5	10	5	8	7	-4.5	-12.5	-7.4
ENVIRONMENTAL SCIENCES	839	859	940	1,046	1,209	1,314	1,440	7.8	9.6	8.0
ATMOSPHERIC SCIENCES	110	121	134	129	156	145	179	4.7	23.4	7.2
GEOSCIENCES	530	539	597	674	720	799	865	7.1	8.3	7.2
OCEANOGRAPHY	127	130	143	161	196	223	249	9.8	11.7	10.1
ENVIRONMENTAL SCIENCES, N.E.C.	72	69	66	82	137	147	147	12.6	.0	10.7
MATHEMATICAL/COMPUTER SCIENCES	2,627	2,807	3,172	3,376	4,329	5,024	5,720	11.4	13.9	11.8
COMPUTER SCIENCE	801	944	1,011	1,028	1,581	1,910	2,262	15.6	18.4	16.0
MATHEMATICS AND APPLIED MATHEMATICS	1,430	1,425	1,668	1,816	2,152	2,488	2,773	9.7	11.5	9.9
STATISTICS	396	438	493	532	596	626	685	7.9	9.4	8.1
LIFE SCIENCES	6,511	6,482	6,720	6,868	8,189	8,497	9,058	4.5	6.6	4.8
AGRICULTURAL SCIENCES	1,563	1,727	1,858	1,849	2,042	2,175	2,288	5.7	5.2	5.6
BIOLOGICAL SCIENCES	3,500	3,432	3,473	3,594	4,103	4,221	4,488	3.2	6.3	3.6
ANATOMY	63	61	46	58	75	75	76	3.9	1.3	2.7
BIOCHEMISTRY	473	408	393	432	421	477	560	.1	17.4	2.4
BIOLOGY	481	549	568	568	669	713	723	6.8	1.4	6.0
BIOMETRY/EPIDEMIOLOGY	81	72	66	93	130	145	159	10.2	9.7	10.1
BIOPHYSICS	90	94	72	89	83	70	75	-4.1	7.1	-2.6
BOTANY	420	434	454	481	515	519	531	3.6	2.3	3.4
CELL BIOLOGY	61	67	58	62	60	59	77	-.6	30.5	3.4
ECOLOGY	29	33	31	32	50	67	72	15.0	7.5	13.9
ENTOMOLOGY/PARASITOLOGY	194	230	242	232	222	223	259	2.3	16.1	4.2
GENETICS	100	86	90	104	93	98	94	-.3	-4.1	-.9
MICROBIOLOGY	318	298	278	273	349	358	363	2.0	1.4	1.9
NUTRITION	649	607	633	673	747	741	793	2.2	7.0	2.9
PATHOLOGY	94	95	113	108	143	148	150	7.9	1.4	6.9
PHARMACOLOGY	187	159	148	181	194	184	197	2.7	7.1	3.3
PHYSIOLOGY	153	107	130	109	172	164	174	1.2	6.1	1.9
ZOOLOGY	115	110	131	126	137	131	134	2.2	2.3	2.2
BIOSCIENCES, N.E.C.	22	22	20	23	43	49	51	14.3	4.1	12.8
HEALTH SCIENCES	1,448	1,323	1,389	1,425	2,044	2,101	2,282	6.4	8.6	6.7
ANESTHESIOLOGY	21	3	1	0	1	1	1	-39.8	.0	-35.3
CANCER/ONCOLOGY	19	7	8	10	6	6	6	-17.5	.0	-15.2
CARDIOLOGY	4	5	0	0	0	5	1	3.8	-80.0	-18.0
DENTISTRY	119	111	169	176	244	269	250	14.6	-7.1	11.2
ENDOCRINOLOGY	5	4	5	3	1	1	3	-23.5	200.0	-7.0
GASTROENTEROLOGY	7	1	0	0	0	0	1	-100.0	**	-24.3
HEMATOLOGY	2	0	0	2	1	0	0	-100.0	**	-100.0
NEUROLOGY	26	19	12	17	21	23	24	-2.0	4.3	-1.1
NURSING	48	53	70	146	182	173	222	23.8	28.3	24.5
OBSTETRICS/GYNECOLOGY	7	8	8	5	8	1	2	-27.7	100.0	-16.4
OPHTHALMOLOGY	6	2	0	0	1	2	3	-16.7	50.0	-9.4
OTORHINOLASYNGOLOGY	1	9	12	4	3	0	0	-100.0	**	-100.0
PEDIATRICS	12	7	5	5	2	6	8	-10.9	33.3	-5.6
PHARMACEUTICAL SCIENCES	397	409	403	425	477	462	538	2.6	16.5	4.4
PREVENTIVE MEDICINE/ COMMUNITY HEALTH	356	291	298	248	493	568	567	8.1	-.2	6.9
PSYCHIATRY	11	2	4	3	4	2	0	-24.7	-100.0	-100.0
PULMONARY DISEASE	10	0	0	0	0	0	0	-100.0	**	-100.0
RADIOLOGY	28	31	34	32	36	34	35	3.3	2.9	3.2
SPEECH PATHOLOGY/AUDIOLOGY	130	146	118	103	207	191	229	6.6	19.9	8.4
SURGERY	14	16	16	7	4	8	5	-8.9	-37.5	-13.7
VETERINARY SCIENCES	104	112	128	144	197	197	211	11.2	7.1	10.6
CLINICAL MEDICINE, N.E.C.	53	34	19	25	23	30	33	-9.0	10.0	-6.5
HEALTH RELATED, N.E.C.	68	53	79	70	133	122	143	10.2	17.2	11.2
PSYCHOLOGY	561	576	570	621	968	1,055	831	11.8	-21.2	6.3
SOCIAL SCIENCES	5,717	6,113	6,284	6,966	8,608	9,632	10,211	9.1	6.0	8.6
AGRICULTURAL ECONOMICS	584	623	587	623	650	736	757	3.9	2.9	3.8
ANTHROPOLOGY	274	294	253	286	321	389	422	6.0	8.5	6.4
ECONOMICS (EXCEPT AGRICULTURAL)	2,047	2,221	2,479	2,668	3,004	3,342	3,510	8.5	5.0	8.0
GEOGRAPHY	219	239	242	249	334	361	352	8.7	-2.5	7.0
HISTORY AND PHILOSOPHY OF SCIENCE	20	25	24	25	30	25	30	3.8	20.0	6.0
LINGUISTICS	328	358	400	458	611	739	732	14.5	-.9	12.2
POLITICAL SCIENCE	1,062	1,235	1,137	1,397	1,996	2,240	2,413	13.2	7.7	12.4
SOCIOLOGY	661	633	642	679	818	921	1,042	5.7	13.1	6.7
SOCIOLOGY/ANTHROPOLOGY	53	54	54	61	104	98	91	10.8	-7.1	8.0
SOCIAL SCIENCES, N.E.C.	469	471	444	520	738	781	862	8.9	10.4	9.1

1/ DISTRIBUTION BY CITIZENSHIP WAS NOT REQUESTED IN 1978.

SOURCE: Graduate Science Education: Student Support and Post Doctorals Fall 1981, National Science Foundation, in press

TABLE 1-25

FULL-TIME SCIENCE AND ENGINEERING GRADUATE STUDENTS IN ALL INSTITUTIONS BY AREA, MAJOR SOURCE OF SUPPORT AND SEX, 1981

	Total S/E		Engineering		Physical Sciences		Environmental Sciences		Math/Computer Sciences		Agricultural Sciences		Biological Sciences		Health Sciences		Psychology		Social Sciences	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
MALE																				
All Sources	**165,222**	**100.0**	**41,782**	**100.0**	**19,318**	**100.0**	**8,293**	**100.0**	**13,412**	**100.0**	**7,708**	**100.0**	**23,049**	**100.0**	**8,058**	**100.0**	**12,058**	**100.0**	**31,544**	**100.0**
Federal Total	35,210	21.3	10,190	24.4	6,829	35.4	2,241	27.0	1,555	11.6	1,341	17.4	6,819	29.6	2,128	26.4	1,511	12.5	2,596	8.2
DoD	5,170	3.1	2,964	7.1	723	3.7	259	3.1	678	5.1	9	0.1	82	0.4	126	1.6	100	0.8	229	0.7
HHS Total	9,025	5.5	464	1.1	1,205	6.2	36	0.4	69	0.5	36	0.5	4,563	19.8	1,434	17.8	761	6.3	457	1.4
NIH	7,121	4.3	368	0.9	1,117	5.8	13	0.2	62	0.5	35	0.5	4,283	18.5	586	7.3	434	3.6	223	0.7
Other	1,904	1.2	96	0.2	88	0.5	23	0.3	7	0.1	1	0.0	280	1.2	848	10.5	327	2.7	234	0.7
NSF	7,482	4.5	2,169	5.2	2,613	13.5	919	11.1	514	3.8	57	0.7	777	3.4	21	0.3	125	1.0	287	0.9
All Other Federal	13,533	8.2	4,593	11.0	2,288	11.8	1,027	12.4	294	2.2	1,239	16.1	1,397	6.1	547	6.8	525	4.3	1,623	5.2
Institutional	63,781	38.6	13,040	31.2	9,995	51.7	2,967	35.8	6,778	50.5	2,509	32.6	9,899	42.9	2,181	27.1	4,439	36.8	11,973	38.0
Other Outside	18,012	10.9	6,426	15.4	1,216	6.3	923	11.2	988	7.4	1,875	24.3	1,956	8.5	762	9.4	777	6.4	3,089	9.9
All Other U.S.	10,432	6.3	4,309	10.3	894	4.6	589	7.1	509	3.8	751	9.7	1,111	4.8	415	5.2	738	6.1	1,116	3.5
Foreign	7,580	4.6	2,117	5.1	322	1.7	334	4.0	479	3.6	1,124	14.6	845	3.7	347	4.3	39	0.3	1,973	6.2
Self Support	48,219	29.2	12,126	29.0	1,278	6.6	2,162	26.1	4,091	30.5	1,983	25.7	4,375	18.9	2,987	37.1	5,331	44.2	13,886	44.0
FEMALE																				
All Sources	**88,206**	**100.0**	**4,879**	**100.0**	**4,036**	**100.0**	**2,587**	**100.0**	**4,314**	**100.0**	**2,340**	**100.0**	**14,089**	**100.0**	**17,292**	**100.0**	**14,639**	**100.0**	**24,030**	**100.0**
Federal Total	16,863	19.1	904	18.5	1,168	28.9	668	25.8	241	5.6	400	17.1	3,772	26.8	6,029	34.9	1,539	10.5	2,142	8.9
DoD	487	0.6	135	2.8	73	1.8	45	1.7	54	1.3	2	0.1	19	0.1	78	0.5	44	0.3	37	0.2
HHS Total	9,324	10.6	111	2.3	334	8.3	22	0.9	12	0.3	23	1.0	2,624	18.6	4,393	25.4	901	6.2	904	3.8
NIH	4,206	4.7	63	1.3	315	7.8	7	0.3	6	0.1	18	0.8	2,473	17.6	514	3.0	491	3.4	319	1.3
Other	5,118	5.8	48	1.0	19	0.5	15	0.6	6	0.1	5	0.2	151	1.1	3,879	22.4	410	2.8	585	2.4
NSF	1,672	1.9	181	3.7	421	10.4	285	11.0	92	2.1	13	0.6	367	2.6	15	0.1	121	0.8	177	0.7
All Other Federal	5,380	6.1	477	9.8	340	8.4	316	12.2	83	1.9	362	15.5	762	5.4	1,543	8.9	473	3.2	1,024	4.3
Institutional	30,424	34.5	1,544	31.6	2,346	58.1	1,038	40.1	2,305	53.4	962	41.1	6,398	45.4	2,678	15.5	4,984	34.0	8,169	34.0
Other Outside	5,047	5.7	626	12.8	244	6.0	219	8.5	217	5.0	291	12.4	777	5.5	627	3.6	735	5.0	1,311	5.5
All Other U.S.	3,747	4.2	511	10.5	193	4.8	182	7.0	126	2.9	201	8.6	557	4.0	489	2.8	682	4.7	806	3.4
Foreign	1,300	1.4	115	2.4	51	1.3	37	1.4	91	2.1	90	3.8	220	1.6	138	0.8	53	0.4	505	2.1
Self Support	35,872	40.7	1,805	37.0	278	6.9	662	25.6	1,551	36.0	687	29.4	3,142	21.6	7,958	46.0	7,381	50.4	12,408	51.6

CHAPTER 2

GENERAL DEGREES

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SOURCE: Doctorate Records File, National Research Council

TABLE 2-1

NUMBER AND PERCENT OF DOCTORAL DEGREES GRANTED TO WOMEN, BY FIELD AND DECADE, 1920-1981

	DECADE															
	1920-29		1930-39		1940-49		1950-59		1960-69		1970-79		1980-81		1920-81	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
PHYSICAL SCIENCES	247	7.6	442	6.6	406	5.0	685	3.7	1,577	4.6	3,946	8.2	1,004	12.1	8,805	6.8
Math	51	14.5	115	14.8	89	10.7	113	5.0	364	5.7	1,092	10.1	207	14.1	2,031	8.9
Physics & Astronomy	39	5.9	51	3.8	62	4.2	98	2.0	213	2.2	532	3.9	140	7.0	1,135	3.4
Chemistry	141	7.3	254	6.4	223	4.2	443	4.4	931	6.4	1,888	10.4	490	15.6	4,370	7.6
Earth & Environ. Sciences	16	4.8	22	3.5	32	5.7	31	1.9	69	2.0	348	5.8	120	9.9	638	4.6
COMPUTER SCIENCES											38	11.5	47	10.4	85	10.9
ENGINEERING	2	.9	6	.7	7	.5	20	.3	77	.4	424	1.4	189	3.8	725	1.1
LIFE SCIENCES	378	15.9	765	15.1	738	12.7	1,318	9.1	3,078	11.6	8,921	18.1	2,785	25.8	17,978	15.8
Biological	341	19.5	698	17.8	699	15.7	1,174	11.8	2,739	15.1	7,068	21.6	1,941	28.5	14,660	18.9
Agricultural	8	2.2	11	1.6	5	.6	36	1.1	80	1.4	496	5.0	256	11.5	892	3.6
Medical	29	10.9	56	12.4	34	6.9	108	8.1	259	9.5	1,303	21.2	588	33.5	2,377	18.1
SOCIAL SCIENCES	325	17.1	562	15.8	580	14.5	1,510	11.0	3,604	14.3	14,641	24.5	4,480	35.1	24,287	20.1
Anthropology	8	22.2	28	22.4	22	15.2	90	19.3	218	21.5	1,450	42.6	326	44.2	2,142	36.1
Sociology	32	15.4	89	19.9	99	17.2	221	14.2	442	17.5	1,808	28.9	473	39.3	3,164	24.6
Economics	52	8.5	71	6.4	83	7.1	125	4.2	245	4.6	734	8.8	201	12.9	1,512	7.1
Pol. Sci. & Pub. Adm.	26	9.0	45	8.5	45	7.8	87	5.4	257	8.2	1,043	14.8	257	20.7	1,787	12.3
Psychology	189	29.4	290	26.0	302	24.1	911	14.8	2,264	20.7	8,361	32.2	2,782	43.1	15,099	28.7
ARTS & HUMANITIES	619	25.7	1,291	24.5	1,182	22.9	1,758	15.5	4,423	19.5	14,625	31.4	3,075	40.4	26,973	27.5
History	143	21.6	277	19.3	237	16.6	327	10.4	638	11.3	1,662	15.9	570	33.7	2,276	9.2
Eng. & Am. Lit.	159	30.8	385	28.4	385	26.8	548	17.8	1,515	23.9	4,669	38.9	920	47.5	8,650	32.4
Modern Foreign Lang.	101	29.8	287	27.0	284	29.2	396	22.9	1,032	31.2	3,336	46.8	571	61.3	4,994	32.3
PROFESSIONAL FIELDS	38	6.9	78	7.7	113	9.6	249	9.2	798	12.3	2,387	16.9	799	29.2	4,462	15.5
Business Admin.	-	-	2	1.0	14	6.3	32	3.4	77	2.6	355	5.0	181	14.4	661	5.1
Law. Jurisprudence	9	3.9	14	4.7	7	6.3	14	4.7	6	2.2	15	5.4	2	4.1	67	1.5
Library Sciences	-	-	8	33.3	15	34.1	18	28.6	43	27.0	233	40.7	76	59.8	393	39.7
Social Work	-	-	1	50.0	3	50.0	26	41.3	180	36.7	506	88.3	191	49.4	907	39.7
EDUCATION	209	18.1	615	19.7	1,086	22.8	2,431	18.0	5,367	19.5	21,258	30.2	6,909	45.9	37,875	27.9
TOTAL ALL FIELDS	1,826	15.3	3,784	14.8	4,115	13.5	7,972	9.9	18,964	11.7	66,269	20.7	19,259	30.9	122,199	17.7

SOURCE: Summary Reports, Doctorate Recipients from United States Universities, 1975, 1976, 1977, 1978, 1979, 1980, and 1981, National Research Council

TABLE 2-2

DOCTORATES AWARDED BY U.S. UNIVERSITIES, BY SEX, CY 1920 - FY 1981

YEAR	MEN	WOMEN		TOTAL	YEAR	MEN	WOMEN		TOTAL
	No.	No.	%*			No.	No.	%*	
CY 1920	472	88	15.7	560	CY 1952	6,984	732	9.5	7,716
1921	554	107	16.2	661	1953	7,589	789	9.4	8,378
1922	668	112	14.4	780	1954	7,912	794	9.1	8,706
1923	905	157	14.8	1,062	1955	8,023	881	9.9	8,904
1924	963	170	15.0	1,133	1956	7,695	806	9.5	8,501
1925	1,004	202	16.8	1,206	1957	(5,486)**	(701)**	11.3	(6,187)**
1926	1,242	200	13.9	1,442	FY 1958	7,782	991	11.3	8,773
1927	1,306	233	15.1	1,539	1959	8,236	976	10.6	9,212
1928	1,392	236	14.5	1,628	1960	8,690	1,042	10.7	9,732
1929	1,592	321	16.8	1,913	1961	9,284	1,128	10.8	10,412
1930	1,758	313	15.1	2,071	1962	10,269	1,236	10.7	11,505
1931	1,979	361	15.4	2,340	1963	11,333	1,391	10.9	12,724
1932	2,017	384	16.0	2,401	1964	12,763	1,561	10.9	14,324
1933	2,113	347	14.1	2,460	1965	14,581	1,759	10.8	16,340
1934	2,346	350	13.0	2,696	1966	15,863	2,090	11.6	17,953
1935	2,152	369	14.6	2,521	1967	17,944	2,440	12.0	20,384
1936	2,299	413	15.2	2,712	1968	19,985	2,931	12.8	22,916
1937	2,346	403	14.7	2,749	1969	22,341	3,387	13.2	25,728
1938	2,337	419	15.2	2,756	1970	25,509	3,970	13.5	29,479
1939	2,524	424	14.4	2,948	1971	27,247	4,594	14.4	31,841
1940	2,848	428	13.1	3,276	1972	27,719	5,282	16.0	33,001
1941	3,078	403	11.6	3,481	1973	27,645	6,082	18.0	33,727
1942	2,981	421	12.4	3,402	1974	26,585	6,415	19.4	33,000
1943	2,191	394	15.2	2,585	1975	25,720	7,193	21.9	32,913
1944	1,621	333	17.0	1,954	1976	25,247	7,676	23.3	32,923
1945	1,288	333	20.5	1,621	1977	23,827	7,845	24.8	31,672
1946	1,608	381	19.2	1,989	1978	22,537	8,313	26.9	30,850
1947	2,546	412	13.9	2,958	1979	22,279	8,921	28.6	31,200
1948	3,432	466	12.0	3,898	1980	21,595	9,387	30.3	30,982
1949	4,875	546	10.1	5,421	1981	21,447	9,872	31.5	31,319
1950	5,898	621	9.5	6,519	TOTAL	569,749	122,199	17.7	691,948
1951	6,649	682	9.3	7,331					

* Percent of total doctorate recipients. ** First half of calendar year.

SOURCE: Historical Statistics of the United States, Bureau of the Census, 1960 and Earned Degrees, 1969-70, 1979-80, National Center for Education Statistics

TABLE 2-3

PROPORTION OF COLLEGE AND UNIVERSITY DEGREES EARNED BY WOMEN, 1870-1980

YEAR	ALL DEGREES	BACHELOR'S	MASTER'S	PH.D'S
1870		14.7		
1880		19.3		5.6
1890		17.3		1.3
1900	16.9	19.7	19.1	6.0
1910	22.7	22.7	26.4	9.9
1920	33.7	34.2	30.2	15.1
1930	39.5	39.9	40.4	15.4
1940	40.5	41.6	38.3	13.0
1950	24.4	23.9	29.2	9.7
1960	34.2	35.3	35.1	10.5
1970	40.4	41.5	39.7	13.3
1980	48.8	49.2	49.5	29.7

SOURCE; Doctorate Recipients from United States Universities, 1965-1981
National Research Council

TABLE 2-4

SCIENCE AND ENGINEERING DOCTORATE DEGREES, 1965-1981

YEAR	TOTAL DEGREES AWARDED					
	Total S/E	Physical Sciences [1]	Engineering	Math Sciences [2]	Life Sciences	Social Sciences [3]
1965	10,477	2,865	2,073	685	2,539	2,315
1966	11,456	3,058	2,299	769	2,712	2,618
1967	12,982	3,502	2,603	830	2,967	3,080
1968	14,411	3,667	2,847	970	3,501	3,426
1969	15,949	3,910	3,249	1,064	3,796	3,930
1970	17,731	4,400	3,432	1,222	4,163	4,514
1971	18,880	4,494	3,495	1,236	4,533	5,122
1972	18,940	4,226	3,475	1,281	4,505	5,453
1973	18,948	4,016	3,338	1,222	4,574	5,798
1974	18,316	3,696	3,144	1,196	4,407	5,873
1975	18,352	3,611	2,959	1,149	4,540	6,093
1976	17,872	3,442	2,791	1,003	4,480	6,156
1977	17,373	3,410	2,641	959	4,266	6,097
1978	17,956	3,234	2,423	959	4,887	6,453
1979	18,247	3,321	2,494	977	5,076	6,379
1980	16,171	3,151	2,479	963	5,325	6,253
1981	18,662	3,208	2,528	960	5,461	6,505
	DEGREES AWARDED TO WOMEN					
1965	744	127	7	50	263	297
1966	911	132	8	48	326	397
1967	1,086	161	9	48	401	467
1968	1,295	185	12	47	483	568
1969	1,472	205	10	56	537	664
1970	1,626	243	15	77	538	753
1971	1,929	244	16	96	656	917
1972	2,101	269	21	96	680	1,035
1973	2,446	257	45	119	795	1,230
1974	2,590	260	34	115	784	1,397
1975	2,838	284	50	110	863	1,531
1976	2,986	296	53	113	870	1,654
1977	3,103	303	74	128	845	1,753
1978	3,526	309	53	131	1,082	1,951
1979	3,854	351	63	145	1,190	2,105
1980	4,099	386	90	116	1,342	2,165
1981	4,359	364	99	138	1,443	2,315

[1] Includes Environmental Sciences
[2] Includes Computer Sciences
[3] Includes Psychology

TABLE 2-5

PERCENT OF S/E DOCTORAL RECIPIENTS WHO WERE FOREIGN NATIONALS ON TEMPORARY VISAS, SELECTED YEARS

FIELD	1962 %	1966 %	1970 %	1974 %	1980 %
Physics/Astronomy	13.7	12.2	11.3	17.2	19.2
Chemistry	9.7	11.1	7.9	10.2	15.4
Earth/Env. Sci.	9.2	12.9	13.9	16.1	12.7
Mathematics	16.8	12.6	10.9	18.5	18.7
Economics	17.2	20.1	17.2	22.0	25.0
Political Science	19.1	13.0	9.3	10.8	11.9
Engineering	17.9	16.7	13.7	22.4	34.3
Biological Sci.	14.4	14.3	10.5	10.5	7.8
Medical Sci.	14.6	18.6	16.6	9.4	11.3
Agricultural Sci.	23.8	30.4	25.3	33.2	32.6
TOTAL	15.2	15.3	12.5	16.7	18.8

SOURCE: Summary Report 1981 Doctorate Recipients from United States Universities, National Research Council

TABLE 2-6

DOCTORATE RECIPIENTS, 1981

FIELD	Total	Women	Foreign Temp. Visa	U.S. & Permanent Visa			
				Black	Asian	Hispanic	Indian
PHYSICAL SCIENCES	**4,168**	**502**	**749**	**39**	**214**	**41**	**2**
Mathematics	728	112	186	9	40	5	1
Computer Science	232	26	40	2	16	-	-
Physics/Astronomy	1,015	73	200	6	55	8	-
Chemistry	1,611	235	238	18	91	22	1
Earth, Env./Marine	582	56	85	4	12	6	-
ENGINEERING	**2,528**	**99**	**943**	**19**	**282**	**16**	**4**
LIFE SCIENCES	**5,461**	**1,443**	**728**	**80**	**212**	**61**	**11**
Biology	3,397	986	252	47	136	39	6
Agriculture	1,150	147	388	18	29	16	2
Medical Sciences	914	310	88	15	47	6	3
SOCIAL SCIENCES	**3,148**	**843**	**492**	**119**	**94**	**56**	**4**
PSYCHOLOGY	**3,357**	**1,472**	**80**	**110**	**41**	**86**	**10**
HUMANITIES	**3,745**	**1,547**	**234**	**93**	**56**	**104**	**12**
PROFESSIONAL FIELDS	**1,388**	**424**	**164**	**59**	**44**	**21**	**3**
EDUCATION	**7,489**	**3,534**	**526**	**589**	**112**	**160**	**42**
TOTAL ALL FIELDS	**31,319**	**9,872**	**3,924**	**1,104**	**1,062**	**525**	**89**

SOURCE: Foreign Participation in U.S. Science and Engineering Education and Labor Markets, Special Report, NSF 81-316, National Science Foundation, September 1981; and 1980 and 1981 Summary Report, Doctorate Recipients from United States Universities, National Research Council

TABLE 2-7

NUMBER OF PH.D. RECIPIENTS IN SCIENCE/ENGINEERING BY TYPE OF CITIZENSHIP, 1960 - 1981

YEAR	Total	U.S.	Foreign			Citizenship not Known
			Total	Immigrants	Non-Immigrants	
All Science/ Engr. Fields						
1960	6,316	5,301	966	223	743	49
1961	6,757	5,632	1,032	182	850	93
1962	7,493	6,231	1,174	138	1,036	88
1963	8,279	6,884	1,258	234	1,024	137
1964	9,297	7,625	1,488	294	1,194	184
1965	10,542	8,590	1,797	357	1,440	155
1966	11,537	9,263	1,978	369	1,609	296
1967	13,065	10,561	2,253	568	1,685	251
1968	14,526	11,808	2,489	678	1,811	229
1969	16,075	13,080	2,721	842	1,879	274
1970	17,840	14,494	3,165	1,136	2,029	181
1971	19,078	15,300	3,514	1,411	2,103	264
1972	19,127	15,005	3,812	1,632	2,180	310
1973	19,121	14,788	4,004	1,565	2,439	329
1974	18,460	13,560	4,050	1,388	2,662	850
1975	18,488	14,107	4,015	1,257	2,758	366
1976	18,089	13,922	3,801	1,068	2,713	366
1977	17,641	13,538	3,609	982	2,627	494
1978	17,034	13,009	3,472	970	2,502	553
1979	17,230	13,195	3,526	924	2,602	509
1980	18,171	13,901	3,743	969	2,774	527
1981	18,662	14,090	3,919	927	2,992	853

SOURCE; Women and Minority Ph.D's in the 1970's - A Data Book, 1977, and Summary Report, Doctorate Recipients from U.S. Universities, Series, 1977-1981, National Research Council

TABLE 2-8

DOCTORAL RECIPIENTS WHO ARE U.S. CITIZENS OR HAVE PERMANENT VISAS, BY FIELD, DEGREE COHORT, AND RACIAL/ETHNIC GROUP, 1973-1981

		WHITE		BLACK		AM. INDIAN		HISPANIC		ASIAN		OTHER/UNKNOWN	
FIELD & Ph.D COHORT	TOTAL	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
ALL FIELDS	364,285	301,551	82.8	12,975	3.6	1,789	0.5	4,868	1.3	13,520	3.7	29,575	8.1
1973-76	115,523	94,530	81.8	3,692	3.2	526	0.5	1,161	1.0	4,163	3.6	11,451	9.9
1977-80	222,500	184,621	83.0	8,179	3.7	1,181	0.5	3,182	1.4	8,295	3.7	17,042	7.7
1981	26,262	22,400	85.3	1,104	4.2	82	0.3	525	2.0	1,062	4.0	1,082	4.1
MATHEMATICS	9,835	8,369	85.1	129	1.3	41	0.4	82	0.8	629	6.4	585	5.9
1973-76	2,996	2,675	89.3	34	1.1	13	0.4	21	0.7	186	6.2	67	2.2
1977-80	6,316	5,248	90.2	86	1.5	27	0.5	56	1.0	403	6.9	496	8.5
1981	523	446	85.3	9	1.7	1	0.2	5	1.0	40	7.6	22	4.2
COMPUTER SCIENCES	1,327	885	66.7	9	0.7	7	0.5	8	0.6	83	6.3	339	25.5
1973-76	706	353	50.0	6	0.8	2	0.3	5	0.7	43	6.1	297	42.1
1977-80	433	370	92.7	1	0.3	3	0.8	3	0.8	22	5.5	34	8.5
1981	188	162	86.2	2	1.1	2	1.1			18	9.6	8	4.3
PHYSICS/ASTRONOMY	12,945	10,423	80.5	92	0.7	39	0.3	109	0.8	845	6.5	1,437	11.1
1973-76	4,378	3,516	80.3	28	0.6	13	0.3	27	0.6	280	6.4	514	11.7
1977-80	7,799	6,276	90.4	58	0.8	26	0.4	74	1.1	510	7.3	855	12.3
1981	768	631	82.2	6	0.8			8	1.0	55	7.2	68	8.9
CHEMISTRY	18,722	15,164	81.0	282	1.5	53	0.3	169	0.9	1,485	7.9	1,569	8.4
1973-76	6,081	4,880	80.3	86	1.4	12	0.2	41	0.7	476	7.8	586	9.6
1977-80	11,315	9,163	88.1	178	1.7	40	0.4	106	1.1	918	8.8	910	8.7
1981	1,326	1,121	84.5	18	1.4	1	0.1	22	1.7	91	6.9	73	5.5
EARTH/ ENV./ MARINE	6,908	5,927	85.8	24	0.3	35	0.5	56	0.8	277	4.0	589	8.5
1973-76	1,901	1,590	83.6	2	0.1	11	0.6	9	0.5	74	3.9	215	11.3
1977-80	4,521	3,890	93.4	18	0.4	24	0.6	41	1.0	191	4.6	357	8.6
1981	486	447	92.0	4	0.8			6	1.2	12	2.5	17	3.5
ENGINEERING	25,881	18,863	72.9	228	0.9	81	0.3	224	0.9	3,819	14.8	2,659	10.3
1973-76	8,934	6,452	72.2	75	0.8	24	0.3	51	0.6	1,217	13.6	1,115	12.5
1977-80	15,480	11,319	80.9	141	1.0	53	0.4	157	1.1	2,320	16.6	1,490	10.7
1981	1,467	1,092	74.4	12	0.8	4	0.3	16	1.1	282	19.2	54	3.7
BIOLOGICAL SCIENCES	37,734	31,752	84.1	573	1.5	172	0.5	357	0.9	1,777	4.7	3,103	8.2
1973-76	11,508	9,472	82.3	185	1.6	47	0.4	101	0.9	536	4.7	1,167	10.1
1977-80	23,168	19,589	91.7	341	1.6	119	0.6	217	1.0	1,105	5.2	1,797	8.4
1981	3,058	2,691	87.2	47	1.5	6	0.2	39	1.3	136	4.4	139	4.5
AGRICULTURAL SCIENCES	8,263	7,513	90.9	134	1.6	42	0.5	84	1.0	495	6.0	595	7.2
1973-76	2,753	2,297	90.8	31	1.2	13	0.5	18	0.7	171	6.8	223	8.1
1977-80	5,379	4,581	90.9	85	1.7	27	0.5	50	1.0	295	5.9	341	6.8
1981	731	635	86.9	18	2.5	2	0.3	16	2.2	29	4.0	31	4.2
MEDICAL SCIENCES	7,425	6,056	81.6	206	2.8	25	0.3	53	0.7	503	6.8	582	7.8
1973-76	2,028	1,605	88.3	47	2.6	6	0.3	12	0.6	147	8.1	211	10.4
1977-80	4,595	3,756	00.2	144	3.4	16	0.4	35	0.8	309	7.3	335	7.9
1981	802	695	86.7	15	1.9	3	0.4	6	0.7	47	5.9	36	4.9
SOCIAL SCIENCES	37,740	31,507	83.5	1,194	3.2	167	0.4	488	1.3	1,028	2.7	3,356	8.9
1973-76	12,056	10,007	83.0	315	2.6	49	0.4	107	0.8	289	2.4	1,289	10.7
1977-80	23,175	19,381	91.3	769	3.6	114	0.5	325	1.5	645	3.0	1,941	9.1
1981	2,509	2,119	84.5	110	4.4	4	0.2	56	2.2	94	3.7	126	5.0
PSYCHOLOGY	34,625	30,318	87.6	1,013	2.9	167	0.5	444	1.3	360	1.0	2,323	6.7
1973-76	10,094	8,755	94.9	240	2.6	47	0.5	93	1.0	88	1.0	871	8.6
1977-80	21,378	18,722	93.6	660	3.3	110	0.5	285	1.4	231	1.2	1,370	6.8
1981	3,153	2,841	90.1	113	3.6	10	3.2	66	2.1	41	1.3	82	2.6
LANGUAGES & LITERATURE	24,728	21,308	86.1	464	1.9	110	0.4	780	3.2	225	0.9	1,841	7.4
1973-76	8,552	7,297	85.3	141	1.6	41	0.5	203	2.4	68	0.8	802	9.4
1977-80	14,847	12,852	92.7	292	2.1	66	0.5	510	3.7	136	1.0	991	7.2
1981	1,329	1,159	87.2	31	2.3	3	0.2	67	5.0	21	1.6	48	3.6
OTHER HUMANITIES	25,792	21,833	84.7	589	2.3	145	0.6	565	2.2	558	2.2	2,146	8.3
1973-76	10,453	8,816	84.3	198	1.9	52	0.5	77	0.7	181	1.7	1,129	10.8
1977-80	13,310	11,222	90.6	329	2.7	84	0.7	451	3.6	298	2.4	926	7.5
1981	2,029	1,795	88.5	62	3.1	9	0.4	37	1.8	79	3.9	91	4.5
PROFESSIONAL FIELDS	15,878	13,386	84.3	545	3.4	58	0.4	165	1.0	431	2.7	1,293	8.1
1973-76	4,987	4,173	92.9	142	3.2	18	0.4	39	0.7	119	2.7	496	9.9
1977-80	9,719	8,229	91.6	344	3.8	37	0.4	105	1.2	268	3.0	736	8.2
1981	1,172	984	84.0	59	5.0	3	0.3	21	1.8	44	3.8	61	5.2
EDUCATION	88,872	72,200	81.2	7,356	8.3	637	0.7	1,480	1.7	962	1.1	6,230	7.1
1973-76	27,596	22,211	88.3	2,155	8.6	178	0.7	351	1.3	255	1.0	2,446	8.9
1977-80	54,581	44,428	87.1	4,612	9.0	417	0.8	969	1.9	595	1.2	3,560	7.0
1981	6,695	5,561	83.1	589	8.8	42	0.6	160	2.4	112	1.7	224	3.3

SOURCE: Summary Report, Doctorate Recipients from United States Universities, 1974 to 1981, National Research Council

TABLE 2-9

NUMBER OF DOCTORATE RECIPIENTS BY SOURCES OF SUPPORT IN GRADUATE SCHOOL, FISCAL YEARS 1974, 1976, 1978, 1980 and 1981

SOURCE OF SUPPORT	FISCAL YEAR 1974				FISCAL YEAR 1976				FISCAL YEAR 1978				FISCAL YEAR 1980				FISCAL YEAR 1981			
	Men	%	Women	%	Men	%	Women	%	Men	%	Women	%	Men	%	Women	%	Men	%	Women	%
FEDERAL SUPPORT																				
NSF Fellowship	1,305	5.3	206	3.5	1,105	4.6	226	3.1	586	2.7	139	1.8	554	2.7	153	1.7	518	2.6	139	1.5
NSF Traineeship	1,241	5.0	191	3.2	810	3.4	168	2.3	354	1.7	68	0.9	204	1.0	53	0.6	151	.7	53	.6
NIH Fellowship	663	2.7	270	4.6	500	2.1	227	3.1	369	1.7	193	2.5	341	1.7	207	2.3	349	1.7	202	2.2
NIH Traineeship	1,233	5.0	441	7.5	1,267	5.3	474	6.5	1,068	5.0	473	6.1	980	4.8	510	5.7	977	4.8	517	5.6
NDEA Fellowship	2,789	11.3	707	12.0	1,743	7.3	636	8.7	738	3.5	315	4.0	363	1.8	214	2.4	267	1.3	148	1.6
National Direct Student Loan					2,623	10.9	687	9.4	1,789	8.4	650	8.3	1,960	9.6	991	11.2	2,154	10.7	1,170	12.6
Other HEW					876	3.6	510	7.0	575	2.7	423	5.4	589	2.9	556	6.3	553	2.7	551	5.9
NASA Traineeship	324	1.3	22	0.4	152	0.6	11	0.2	57	0.3	8	0.1								
GI Bill	3,263	13.2	22	0.4	3,537	14.7	49	0.7	2,657	12.5	50	0.6	2,011	9.9	48	0.5	1,663	8.2	53	.6
Other Fed. Support*	2,631	10.7	702	11.9	1,838	7.7	449	6.2	1,159	5.4	341	4.4	1,147	5.6	413	4.6	1,216	6.1	399	4.0
NATIONAL FELLOWSHIPS**													507	2.5	338	3.8	513	2.5	356	3.8
INSTITUTIONAL FUNDS																				
Univ. Fellowship	4,680	18.9	1,360	23.1	4,939	20.6	1,746	23.9	3,844	18.0	1,422	18.2	3,717	18.2	1,675	18.8	3,786	18.8	1,751	18.8
Teaching Ass'tship	12,326	49.8	2,786	47.3	12,333	51.3	3,502	48.0	9,833	46.1	3,360	43.1	9,568	46.9	3,818	43.0	9,567	47.4	3,940	42.4
Research Ass'tship	9,079	36.7	1,421	24.1	9,993	41.6	1,963	26.9	8,249	38.7	1,957	25.1	8,189	40.2	2,303	25.9	8,430	41.8	2,434	26.2
Ed. Funds, Industry	979	4.0	108	1.8	1,038	4.3	149	2.0	632	3.0	142	1.8	676	3.3	204	2.3	691	3.4	220	2.4
Other	2,163	8.7	701	11.9	2,205	9.2	884	12.1	1,453	6.8	678	8.7	1,462	7.2	845	9.5	1,420	7.0	873	9.4
PERSONAL FUNDS																				
Own Earnings	9,678	39.1	2,529	42.9	13,683	57.0	4,375	60.0	10,310	48.4	4,489	57.6	10,221	50.1	5,288	59.5	10,107	50.1	5,699	61.3
Spouse's Earnings	4,948	20.0	1,232	20.9	8,809	36.7	2,419	33.2	6,411	30.1	2,590	33.2	6,017	29.5	2,967	33.4	5,788	28.7	3,154	33.9
Family Contributions	1,632	6.6	495	8.4	4,042	16.8	1,357	18.6	2,876	13.5	1,215	15.6	3,158	15.5	1,530	17.2	3,381	16.7	1,610	17.3
Borrowings	3,308	13.4	703	11.9	3,227	13.4	865	11.9	1,995	9.4	799	10.2	2,054	10.1	926	10.4	2,159	10.7	1,146	12.3
Other	1,282	5.2	331	5.6	1,706	7.1	565	7.7	1,550	7.3	537	6.9	1,541	7.6	579	6.5	1,615	8.0	641	6.9
UNDUPLICATED TOTAL	24,761		5,894		24,024		7,295		21,323		7,799		20,385		8,886		20,187		8,293	

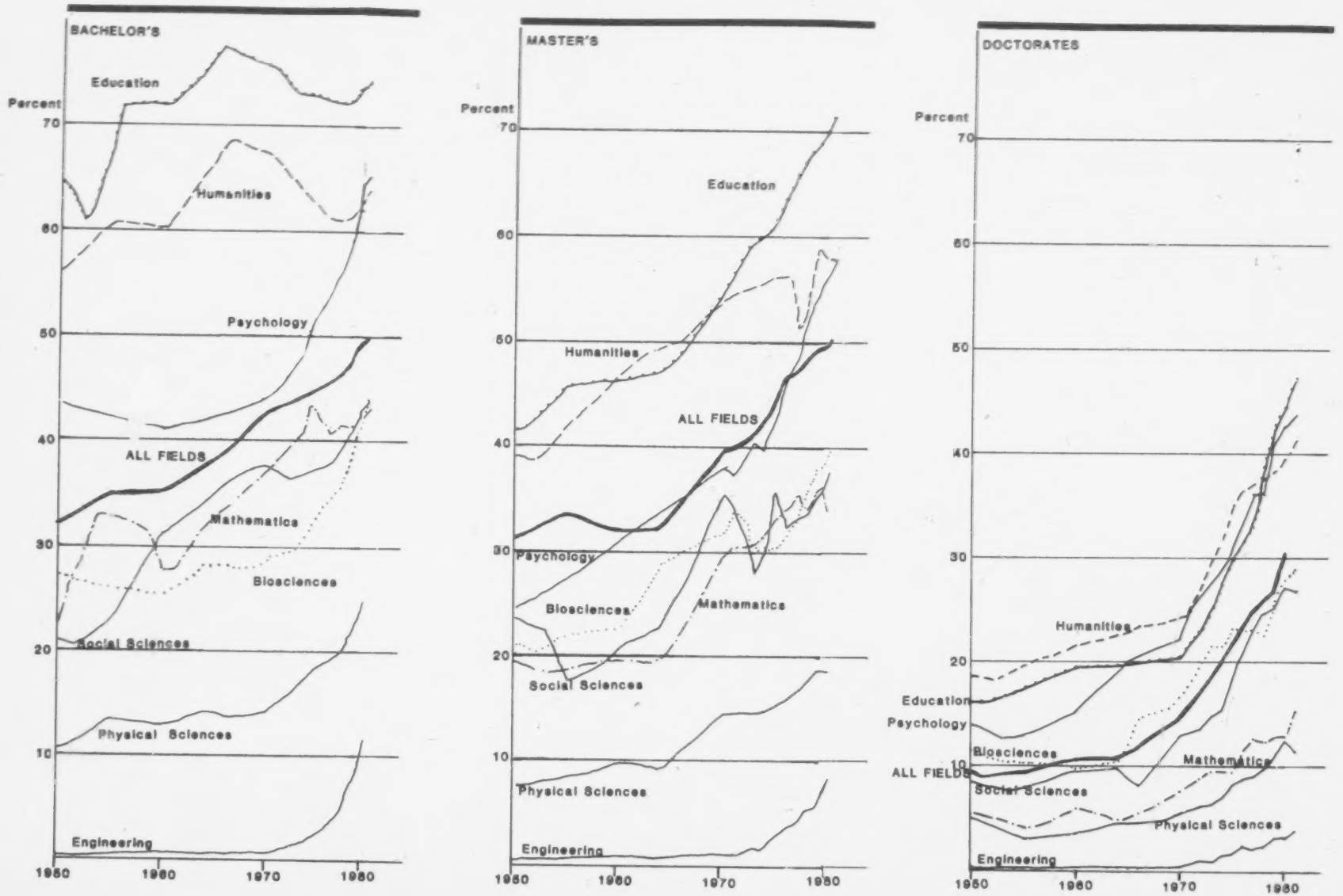
* Includes AEC/ERDA Fellowships and NASA Traineeships which were formerly shown separately, plus 83 recipients of funds under the new graduate and professional opportunities program.

** Includes Woodrow Wilson Fellowships which were formerly shown separately.

SOURCE: Series of Earned Degrees, USOE and Summary Report, Doctorate Recipients from United States Universities, 1971-1981

TABLE 2-10

PERCENT OF DEGREES GRANTED TO WOMEN 1950 - 1981



SOURCE: Earned Degrees, Unpublished data, National Center for Education Statistics, 1980-81

TABLE 2-11

PROPORTION OF BACHELOR'S AND MASTER'S DEGREES AWARDED TO WOMEN, BY FIELD, 1971-72 - 1980-81

	1971-72	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81
BACHELOR'S DEGREES									
Agricultural & Nat. Res.	5.5%	9.7%	14.1%	18.3%	22.2%	24.6%	27.1%	29.6%	30.8%
Architecture & Environ. Des.	12.0	14.8	17.4	19.2	21.4	23.7	25.8	27.8	28.1
Area Studies	52.5	54.3	55.1	55.5	56.0	59.7	58.2	60.5	60.1
Biological Sciences	29.6	31.5	33.3	34.8	36.4	38.7	40.6	42.4	44.1
Business & Management	9.7	13.1	16.4	19.8	23.6	27.3	30.7	33.8	36.7
Communications	35.5	38.4	40.5	41.5	44.3	46.9	50.0	52.3	54.7
Computer & Inform. Sci.	13.6	16.4	19.0	19.8	23.9	25.8	28.1	30.3	32.5
Education	74.1	73.5	73.3	72.8	72.2	72.5	73.2	73.9	75.0
Engineering	1.0	1.6	2.2	3.2	4.5	6.7	8.3	9.3	10.3
Fine & Applied Arts	59.9	60.2	61.9	60.9	61.4	62.0	62.5	63.2	63.4
Foreign Languages	75.1	76.4	77.0	76.4	76.2	76.1	76.0	75.7	75.6
Health Professions	75.7	77.4	77.8	78.8	79.2	80.6	82.0	82.3	83.5
Home Economics	96.5	96.4	96.0	95.9	95.9	95.6	95.1	95.4	95.0
Law	6.6	10.5	14.2	18.8	27.5	28.6	40.4	45.5	50.0
Letters	60.1	58.0	57.3	56.9	56.7	57.2	58.0	59.4	59.8
Library Science	93.3	92.6	92.5	93.1	90.9	88.5	94.6	95.0	94.1
Mathematics	39.1	41.0	42.0	40.7	41.6	41.3	41.7	42.3	42.8
Military Science	0.0	0.3	0.0	0.2	0.3	2.3	3.5	4.0	3.9
Physical Sciences	15.1	16.6	18.4	19.2	20.1	21.5	22.6	23.9	24.6
Psychology	46.4	50.5	52.7	54.4	56.7	58.9	61.3	63.3	65.0
Public Affairs & Services	47.9	43.5	45.6	43.7	45.1	49.6	53.5	55.3	58.0
Social Sciences	36.3	36.6	37.4	37.9	39.4	40.6	42.0	43.7	44.2
Theology	27.8	28.1	27.4	27.3	25.7	24.1	25.6	25.4	25.4
Interdisciplinary Studies	31.1	37.1	42.2	45.0	47.0	47.3	49.9	50.2	51.0
All Disciplines	**43.7**	**44.4**	**45.4**	**45.6**	**46.2**	**47.2**	**48.3**	**49.2**	**49.8**
MASTER'S DEGREES									
Agricultural & Nat. Res.	7.1	9.8	11.8	14.3	14.6	18.7	20.2	22.4	23.5
Architecture & Environ. Des.	14.6	18.4	20.3	20.8	22.5	26.0	28.5	28.5	29.1
Area Studies	40.7	38.9	43.2	45.3	46.9	47.8	49.0	47.8	51.6
Biological Sciences	33.1	30.6	30.0	31.8	33.8	35.5	37.7	37.1	38.9
Business & Management	3.9	6.6	8.4	11.6	14.3	16.9	19.1	22.3	25.0
Communications	34.4	36.8	42.1	41.8	44.4	49.3	48.5	50.5	53.4
Computer & Inform. Sci.	11.4	12.9	14.7	14.5	16.7	18.7	18.8	20.9	23.0
Education	57.3	59.9	62.2	64.3	65.8	67.7	68.6	70.2	71.5
Engineering	1.6	2.3	2.4	3.6	4.4	5.3	6.1	7.0	8.2
Fine & Applied Arts	46.3	45.9	46.8	48.9	51.2	52.1	53.9	53.3	53.0
Foreign Languages	65.1	66.1	66.9	66.7	69.5	70.8	69.6	70.4	67.0
Health Professions	56.4	60.2	61.8	66.5	67.9	70.3	71.1	72.3	73.9
Home Economics	92.7	91.1	89.3	91.5	91.1	91.9	91.2	91.3	90.2
Law	5.8	7.1	8.0	12.0	13.2	14.6	15.5	15.7	17.8
Letters	57.7	56.6	58.8	58.3	59.5	61.8	61.3	60.6	61.1
Library Science	79.9	77.8	78.8	78.3	79.6	80.0	80.4	81.3	82.7
Mathematics	29.8	31.0	32.9	34.0	35.1	34.0	34.7	36.1	34.1
Military Science	0.0	0.0	0.0	0.0	2.3	2.2	0.0	0.0	0.0
Physical Sciences	14.1	14.6	14.5	15.0	16.6	17.0	18.2	18.6	18.4
Psychology	38.4	39.8	42.9	46.7	48.1	52.0	54.1	56.8	58.0
Public Affairs & Services	47.0	45.3	44.6	45.3	45.5	47.9	50.8	52.2	55.4
Social Sciences	28.2	28.8	30.0	31.6	32.9	33.2	35.3	36.2	37.6
Theology	23.4	27.2	30.9	32.1	31.4	30.5	32.0	31.0	33.6
Interdisciplinary Studies	39.2	45.8	47.7	46.5	37.1	37.5	38.8	42.2	39.8
All Disciplines	**40.6**	**43.1**	**44.8**	**46.4**	**47.1**	**48.3**	**49.1**	**49.5**	**50.3**

SOURCE: Earned Degrees Conferred, Series 1948 - 1979, National Center for Education Statistics, and Summary Report 1970 - 1979 Doctorates Awarded by U.S. Universities and Doctorate Records File, National Research Council

TABLE 2-12

PERCENT OF DEGREES AWARDED TO WOMEN BY TIME PERIOD, DEGREE LEVEL AND BROAD FIELD

FIELD	BACHELOR'S			MASTER'S			DOCTORATE			
	1948-1959	1960-1969	1970-1979	1948-1959	1960-1969	1970-1979	1940-1949	1950-1959	1960-1969	1970-1979
Total All Fields	32.1	40.0	45.2	31.9	34.6	44 5	13.5	9.9	11 7	20.7
Physical Sciences	12.8	13.8	17.7	8.2	10.6	15.0	5.0	3.7	4.6	8.2
Chemistry	18.6	19.0	21.6	13.0	18.9	22 4	4.2	4.4	6.4	10.4
Physics	4.5	5.3	8.7	3.9	4.7	8.0	4.2	2.0	2 2	3.9
Earth Sciences	4.1	9 1	18.0	3 5	6.4	14.2	5.7	1.9	2.0	5.8
Mathematics	29.1	34 2	40.0	19.8	23.8	31.6	10.7	5.0	5.7	10.1
Computer Sciences	-	12.5	20.9		7.5	14.5	-	-	-	11.5
Engineering	0 3	0.5	3.2	0.3	0.6	3.0	0.5	0.3	0.4	1.4
Life Sciences	-	-	-	-	-	-	12.7	9.1	11.6	18.1
Biological Sciences	25.8	28.4	33.7	21.0	27.7	32.9	15.7	11 8	15.1	21.6
Agricultural Sciences	1.8	3.4	15.9	1.9	4.5	12.8	0.6	1.1	1.4	5.0
Medical Sciences	-	-	-	-	-	-	6.9	8.1	9.5	21.2
Social Sciences*	27.2	32.6	36.4	18.3	20.5	31 2	14.5	11.0	14.3	31.6
Psychology	42.9	41 8	52 0	30.4	33 5	44 9	24.1	14.8	20.7	32.2
Business & Management	12.2	13 8	18.0	-		10.7	6.3	3.4	2.6	5 0
Arts & Humanities	60.2	66 4	57 3	43 1	50 3	51 6	22.9	15 5	19 5	31.4
Education	75.4	75.8	73 5	44 7	48.3	62 1	22.8	18.0	19.5	30.2

* Anthropology, Sociology, Economics and Political Science

SOURCE: Earned Degrees Conferred Series, 1970-71 - 1980-81, National Center for Education Statistics

TABLE 2-13

TOTAL AND PROPORTION OF BACHELOR'S, MASTER'S AND DOCTORAL DEGREES AWARDED TO WOMEN 1970-71 THROUGH 1980-81 BY BROAD DISCIPLINE DIVISION

	DEGREES AWARDED 1970-71 - 1980-81								
	Bachelor's			Master's			Ph. D.'s		
	Total	Women	% W	Total	Women	% W	Total	Women	% W
Agriculture & Nat. Resources	206,696	40,181	19.4	37,079	5,631	15.2	10,837	640	5.9
Architecture & Environ. Design	90,703	18,505	20.4	49,139	6,868	14.0	778	124	15.9
Area Studies	31,269	17,508	56.0	10,446	4,571	43.8	1,717	493	28.7
Biological Sciences	518,657	185,521	35.8	71,297	24,141	33.9	38,777	8,538	22.0
Business & Management	1,665,210	377,558	22.7	459,518	65,442	14.2	9,834	707	7.2
Communications	230,109	104,115	45.2	30,486	13,324	43.7	1,868	479	25.6
Computer & Inform. Sciences	74,281	18,470	24.9	29,612	4,965	17.0	2,286	192	8.4
Education	1,717,466	1,262,066	73.5	1,203,131	775,945	64.5	82,370	27,939	33.9
Engineering	610,899	30,213	4.9	178,257	7,089	4.0	32,642	698	2.1
Fine & Applied Arts	429,469	264,021	61.5	90,189	44,744	49.6	7,042	2,191	31.1
Foreign Languages	173,520	131,726	75.9	37,771	25,294	67.0	8,436	3,946	46.8
Health Professions	542,413	433,284	79.9	130,294	86,939	66.7	6,865	2,198	32.0
Home Economics	177,621	170,259	95.9	23,480	21,431	91.3	1,883	1,327	70.5
Law	6,332	1,628	25.7	15,459	1,864	12.0	466	34	7.3
Letters	609,358	357,172	58.6	119,530	70,384	58.9	25,217	8,684	35.9
Library Science	9,043	8,383	92.7	77,223	61,507	79.6	748	338	45.2
Mathematics	189,689	74,084	39.0	44,033	14,235	32.3	10,067	1,157	11.5
Military Science	5,213	50	1.0	172	1	0.6	-	-	-
Physical Sciences	243,756	42,068	17.3	62,235	10,021	15.8	39,023	3,390	8.7
Psychology	502,935	274,556	54.6	314,206	155,527	49.5	26,876	9,241	34.4
Public Affairs & Services	314,206	155,527	49.5	174,639	84,624	48.5	3,365	1,013	30.1
Social Sciences	1,438,299	557,749	38.8	168,628	52,921	31.4	41,534	8,681	20.9
Theology	56,430	14,760	26.2	36,315	10,820	29.8	10,204	477	4.7
Interdisciplinary Studies	312,054	137,943	44.2	40,297	16,649	41.3	3,167	904	28.5
ALL DISCIPLINES	**10,156,134**	**4,685,675**	**46.1**	**3,159,258**	**1,446,536**	**45.8**	**366,006**	**83,301**	**22.8**

SOURCE: National Center for Education Statistics, Unpublished, 1982

TABLE 2-14

BACHELOR'S, MASTER'S AND DOCTOR'S DEGREES CONFERRED BY SEX AND FIELD, 1980-81

DISCIPLINE DIVISION AND SPECIALTY	BACHELOR'S DEGREES REQUIRING 4 OR 5 YEARS			MASTER'S DEGREES			DOCTOR'S DEGREES (PH.D., ED.D., ETC.)		
	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN
1	2	3	4	5	6	7	8	9	10
ALL DISCIPLINE DIVISIONS, TOTAL	935,140	469,883	465,257	295,739	147,043	148,696	32,958	22,711	10,247
AGRICULTURE AND NATURAL RESOURCES, TOTAL	21,886	15,154	6,732	4,003	3,061	942	1,067	940	127
AGRICULTURE, GENERAL	1,942	1,458	484	349	288	61	1	1	
AGRONOMY	1,597	1,243	354	445	367	78	227	202	25
SOILS SCIENCE	580	401	179	150	124	26	74	69	5
ANIMAL SCIENCE	3,728	2,033	1,695	441	321	120	151	137	14
DAIRY SCIENCE	269	193	76	47	34	13	19	19	
POULTRY SCIENCE	113	80	33	53	42	11	14	9	5
FISH, GAME, AND WILDLIFE MANAGEMENT	1,379	1,005	374	302	257	45	51	44	7
HORTICULTURE	1,661	874	787	285	172	113	79	67	12
ORNAMENTAL HORTICULTURE	598	324	274	15	10	5	5	2	3
AGRICULTURAL AND FARM MANAGEMENT	245	223	22						
AGRICULTURAL ECONOMICS	1,861	1,554	307	583	472	111	157	143	14
AGRICULTURAL BUSINESS	1,611	1,331	280	21	19	2			
FOOD SCIENCE AND TECHNOLOGY	758	370	388	317	179	138	86	69	17
FORESTRY	2,140	1,708	432	491	408	83	109	100	9
NATURAL RESOURCES MANAGEMENT	1,735	1,090	645	223	157	66	34	31	3
AGRICULTURE AND FORESTRY TECHNOLOGIES	166	148	18	18	10	8	10	9	1
RANGE MANAGEMENT	242	187	55	85	70	15	22	22	
OTHER	1,261	932	329	178	131	47	28	16	12
ARCHITECTURE AND ENVIRONMENTAL DESIGN, TOTAL	9,455	6,800	2,655	3,153	2,234	919	93	73	20
ENVIRONMENTAL DESIGN, GENERAL	1,067	736	331	85	49	36	5	4	1
ARCHITECTURE	5,851	4,778	1,073	1,550	1,231	319	19	16	3
INTERIOR DESIGN	874	108	766	20	4	16			
LANDSCAPE ARCHITECTURE	993	686	307	227	129	98	1	1	
URBAN ARCHITECTURE	10	8	2	101	82	19	7	7	
CITY, COMMUNITY, AND REGIONAL PLANNING	414	280	134	1,070	693	377	54	38	16
OTHER	246	204	42	100	46	54	7	7	
AREA STUDIES, TOTAL	2,585	1,031	1,554	742	359	383	157	100	57
ASIAN STUDIES, GENERAL	199	107	92	82	36	46	4	2	2
EAST ASIAN STUDIES	213	88	125	89	49	40	10	9	1
SOUTH ASIAN (INDIA, ETC.) STUDIES	9	4	5	11	8	3	4	3	1
SOUTHEAST ASIAN STUDIES	2	2		11	9	2	3	3	
AFRICAN STUDIES	6	2	4	14	7	7	3	3	
ISLAMIC STUDIES	---	---	--	2	1	1	1	---	1
RUSSIAN AND SLAVIC STUDIES	111	51	60	56	29	27	1	1	--
LATIN AMERICAN STUDIES	251	96	155	106	57	49	2	1	1
MIDDLE EASTERN STUDIES	30	15	15	56	39	17	20	16	4
EUROPEAN STUDIES, GENERAL	58	11	47	12	4	8	3	1	2
EASTERN EUROPEAN STUDIES	6	2	4	15	13	2			
WEST EUROPEAN STUDIES	33	8	25	6	2	4	1	1	
AMERICAN STUDIES	1,300	492	808	198	71	127	83	44	39
PACIFIC AREA STUDIES	6	5	1	4	1	3			
OTHER	361	148	213	80	33	47	22	16	6
BIOLOGICAL SCIENCES, TOTAL	43,216	24,149	19,067	5,978	3,654	2,324	3,718	2,666	1,052
BIOLOGY, GENERAL	31,323	17,260	14,063	2,598	1,619	979	734	502	232
BOTANY, GENERAL	679	307	372	254	145	109	169	120	49
BACTERIOLOGY	187	75	112	44	22	22	15	15	4
PLANT PATHOLOGY	53	34	19	161	109	52	91	77	14
PLANT PHARMACOLOGY				2	2		5	4	1
PLANT PHYSIOLOGY	21	10	11	16	10	6	32	30	2
ZOOLOGY, GENERAL	3,328	2,082	1,246	386	244	142	222	164	58
PATHOLOGY, HUMAN AND ANIMAL	46	20	26	103	62	41	108	79	29
PHARMACOLOGY, HUMAN AND ANIMAL	27	21	6	106	57	49	225	170	55
PHYSIOLOGY, HUMAN AND ANIMAL	303	180	123	257	185	72	258	192	66
MICROBIOLOGY	2,227	1,055	1,172	438	230	208	351	234	117
ANATOMY				61	42	19	143	99	44
HISTOLOGY				4	3	1	1		1
BIOCHEMISTRY	1,037	1,181	656	258	168	90	460	318	142
BIOPHYSICS	59	45	14	41	25	16	81	67	14
MOLECULAR BIOLOGY	259	152	107	25	19	6	75	50	25
CELL BIOLOGY	40	19	21	24	19	5	35	23	12
MARINE BIOLOGY	465	334	131	74	57	17	15	14	1
BIOMETRICS AND BIOSTATISTICS	22	10	12	74	38	36	41	32	9
ECOLOGY	733	442	291	229	163	66	80	63	17
ENTOMOLOGY	242	182	60	238	182	56	133	123	10
GENETICS	74	38	36	108	36	72	130	88	42
RADIOBIOLOGY				25	18	7	9	5	4
NUTRITION, SCIENTIFIC	138	25	113	212	52	160	78	46	32
NEUROSCIENCES	75	55	20	7	5	2	49	39	10
TOXICOLOGY	51	29	22	86	48	38	11	10	1
EMBRYOLOGY									
OTHER	1,027	593	434	167	94	73	183	102	81
BUSINESS AND MANAGEMENT, TOTAL	200,876	127,070	73,806	58,018	43,505	14,513	845	720	125
BUSINESS AND COMMERCE, GENERAL	38,706	22,995	15,711	8,900	6,607	2,293	122	107	15
ACCOUNTING	43,344	26,298	17,046	3,449	2,415	1,034	56	48	8
BUSINESS STATISTICS	290	172	118	204	147	57	15	11	4
BANKING AND FINANCE	12,471	8,964	3,507	4,433	3,379	1,054	36	32	4
INVESTMENTS AND SECURITIES	181	125	56	113	93	20			
BUSINESS MANAGEMENT AND ADMINISTRATION	68,609	45,136	23,473	33,786	25,738	8,048	431	359	72
OPERATIONS RESEARCH	355	272	83	507	414	93	47	42	5
HOTEL AND RESTAURANT MANAGEMENT	2,107	1,427	680	100	63	37	2	2	
MARKETING AND PURCHASING	24,601	14,498	10,143	2,018	1,290	728	38	31	7

SOURCE: National Center for Education Statistics, Unpublished, 1982

TABLE 2-14

BACHELOR'S, MASTER'S AND DOCTOR'S DEGREES CONFERRED BY SEX AND FIELD, 1980-81
(Continued)

DISCIPLINE DIVISION AND SPECIALTY	BACHELOR'S DEGREES REQUIRING 4 OR 5 YEARS			MASTER'S DEGREES			DOCTOR'S DEGREES (PH.D., ED.D., ETC.)		
	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN
1	2	3	4	5	6	7	8	9	10
BUSINESS AND MANAGEMENT, TOTAL—CONTINUED									
TRANSPORTATION AND PUBLIC UTILITIES	1,538	1,275	263	120	111	9	3	3	---
REAL ESTATE	893	725	168	87	74	13	1	1	---
INSURANCE	606	474	132	39	30	9	3	3	---
INTERNATIONAL BUSINESS	491	265	226	1,426	1,043	383	2	2	---
SECRETARIAL STUDIES	1,611	70	1,541	11	1	10	---	---	---
PERSONNEL MANAGEMENT	2,294	1,351	943	897	633	264	2	2	---
LABOR AND INDUSTRIAL RELATIONS	1,526	874	652	881	594	287	16	10	6
BUSINESS ECONOMICS	2,437	1,638	799	308	236	72	71	67	4
OTHER	816	551	265	739	637	102			
COMMUNICATIONS	31,282	14,179	17,103	3,105	1,448	1,657	182	107	75
COMMUNICATIONS, GENERAL	13,197	5,624	7,573	1,615	722	893	134	72	62
JOURNALISM	8,813	3,592	5,221	867	405	462	26	19	7
RADIO - TELEVISION	4,767	2,822	1,945	216	130	86	11	7	4
ADVERTISING	2,310	921	1,389	138	58	80			
COMMUNICATION MEDIA	1,854	996	858	209	96	113	11	9	2
OTHER	341	224	117	60	37	23			
COMPUTER AND INFORMATION SCIENCES, TOTAL	15,121	10,202	4,919	4,218	3,247	971	252	227	25
COMPUTER AND INFORMATION SCIENCES, GENERAL	12,180	8,326	3,854	3,859	2,988	871	243	218	25
INFORMATION SCIENCES AND SYSTEMS	1,799	1,170	629	298	211	87	8	8	---
DATA PROCESSING	785	468	317	26	20	6	---	---	---
COMPUTER PROGRAMMING	150	99	51	10	5	5	---	---	---
SYSTEMS ANALYSIS	178	122	56	25	23	2	1	1	
OTHER	29	17	12						
EDUCATION, TOTAL	108,265	27,069	81,196	98,381	28,080	70,301	7,900	4,164	3,736
EDUCATION, GENERAL	2,777	437	2,340	13,038	3,538	9,500	1,394	674	720
ELEMENTARY EDUCATION, GENERAL	38,524	3,544	34,980	13,833	1,537	12,296	224	67	157
SECONDARY EDUCATION, GENERAL	2,973	1,219	1,754	5,268	1,996	3,272	169	86	83
JUNIOR HIGH SCHOOL EDUCATION	248	66	182	146	43	103	9	4	5
HIGHER EDUCATION, GENERAL	5	2	3	368	156	212	376	218	158
JUNIOR AND COMMUNITY COLLEGE EDUCATION	2		2	212	118	94	126	69	57
ADULT AND CONTINUING EDUCATION	25	10	15	933	324	609	134	67	69
SPECIAL EDUCATION, GENERAL	8,843	747	8,096	9,482	1,337	8,145	207	77	130
ADMINISTRATION OF SPECIAL EDUCATION	20	3	17	37	12	25	18	13	5
EDUCATION OF THE MENTALLY RETARDED	1,660	142	1,518	463	94	369	4	2	2
EDUCATION OF THE GIFTED	28		28	99	10	89	1		1
EDUCATION OF THE DEAF	349	15	334	356	48	308	3	1	2
EDUCATION OF THE CULTURALLY DISADVANTAGED	22	5	17	52	10	42	---	---	---
EDUCATION OF THE VISUALLY HANDICAPPED	93	4	89	114	34	80	1		1
SPEECH CORRECTION	1,197	57	1,140	495	34	461	5	1	4
EDUCATION OF THE EMOTIONALLY DISTURBED	471	44	427	411	63	348	5	2	3
REMEDIAL EDUCATION	17		17	190	20	170	3	2	1
SPECIAL LEARNING DISABILITIES	846	41	805	1,507	137	1,370	27	11	16
EDUCATION OF THE PHYSICALLY HANDICAPPED	137	12	125	90	22	68	3		3
EDUCATION OF THE MULTIPLE HANDICAPPED	104	12	92	128	20	108	5	3	2
SOCIAL FOUNDATIONS	32	13	19	333	155	178	173	103	70
EDUCATIONAL PSYCHOLOGY	235	37	198	2,225	708	1,517	621	321	300
PRE-ELEMENTARY EDUCATION	4,807	145	4,662	1,726	62	1,664	46	15	31
EDUCATIONAL STATISTICS AND RESEARCH	---	---	---	65	29	36	63	31	32
EDUCATIONAL TESTING, EVALUATION AND MEASUREMENT	50	5	45	122	32	90	17	4	13
STUDENT PERSONNEL	299	91	208	12,200	3,801	8,399	643	343	300
EDUCATIONAL ADMINISTRATION	27	12	15	9,298	5,284	4,014	1,593	977	616
EDUCATIONAL SUPERVISION	46	13	33	1,260	543	717	104	59	45
CURRICULUM AND INSTRUCTION	318	42	276	3,700	986	2,714	699	338	361
READING EDUCATION	370	13	357	4,096	503	3,593	151	33	118
ART EDUCATION	2,392	437	1,955	807	176	631	55	24	31
MUSIC EDUCATION	5,332	2,256	3,076	1,127	517	610	68	40	28
MATHEMATICS EDUCATION	798	294	504	372	139	233	30	18	12
SCIENCE EDUCATION	597	258	339	483	245	238	79	51	28
PHYSICAL EDUCATION	19,095	9,525	9,570	4,219	2,244	1,975	222	139	83
DRIVER AND SAFETY EDUCATION	109	95	14	271	227	44	5	5	
HEALTH EDUCATION	2,259	619	1,640	838	223	615	82	34	48
BUSINESS, COMMERCE, AND DISTRIBUTIVE EDUCATION	3,405	592	2,813	1,131	223	908	41	28	13
INDUSTRIAL ARTS, VOCATIONAL & TECHNICAL EDUCATION	5,772	4,988	784	2,436	1,634	802	265	174	91
AGRICULTURAL EDUCATION	955	787	168	233	188	45	22	13	9
EDUC. OF EXCEPTIONAL CHILDREN, NOT CLASSIFIED ABO	163	14	149	113	18	95	11	6	5
HOME ECONOMICS EDUCATION	1,767	22	1,745	412	12	400	7		7
NURSING EDUCATION	171		171	60	8	52	7	5	2
OTHER	925	451	474	1,632	570	1,062	180	106	74
ENGINEERING, TOTAL	75,000	67,301	7,699	16,709	15,347	1,362	2,561	2,457	104
ENGINEERING, GENERAL	4,063	3,521	542	1,517	1,382	135	254	236	18
AEROSPACE, AERONAUTICAL, ASTRONAUTICAL ENGR.	1,809	1,680	129	408	388	20	109	108	1
AGRICULTURAL ENGINEERING	876	820	56	153	143	10	44	43	1
ARCHITECTURAL ENGINEERING	304	256	48	49	41	8			
BIOENGINEERING AND BIOMEDICAL ENGINEERING	437	325	112	185	153	32	54	52	2
CHEMICAL ENGINEERING	6,527	5,275	1,252	1,267	1,104	163	300	287	13
PETROLEUM ENGINEERING	1,035	938	97	138	125	13	16	16	
CIVIL, CONSTRUCTION, & TRANSPORTATION ENGINEERING	10,678	9,557	1,121	2,891	2,684	207	325	316	9
ELECTRICAL, ELECTRONICS, COMMUNICATIONS ENGR.	14,938	13,842	1,096	3,901	3,680	221	535	515	20
MECHANICAL ENGINEERING	13,329	12,193	1,136	2,291	2,175	116	276	269	7
GEOLOGICAL ENGINEERING	215	166	49	31	26	5	6	6	
GEOPHYSICAL ENGINEERING	55	39	16	17	14	3	8	7	1
INDUSTRIAL AND MANAGEMENT ENGINEERING	3,833	3,077	756	1,631	1,465	166	112	103	9
METALLURGICAL ENGINEERING	603	487	116	193	172	21	75	70	5

SOURCE: National Center for Education Statistics, Unpublished, 1982

TABLE 2-14

BACHELOR'S, MASTER'S AND DOCTOR'S DEGREES CONFERRED BY SEX AND FIELD, 1980-81
(Continued)

DISCIPLINE DIVISION AND SPECIALTY	BACHELOR'S DEGREES REQUIRING 4 OR 5 YEARS			MASTER'S DEGREES			DOCTOR'S DEGREES (PH.D., ED.D., ETC.)		
	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN
1	2	3	4	5	6	7	8	9	10
ENGINEERING, TOTAL—CONTINUED									
MATERIALS ENGINEERING	505	413	92	355	313	42	105	97	8
CERAMIC ENGINEERING	291	234	57	60	50	10	19	17	2
TEXTILE ENGINEERING	57	35	22						
MINING AND MINERAL ENGINEERING	750	689	61	84	83	1	10	10	—
ENGINEERING PHYSICS	284	260	24	57	55	2	26	26	—
NUCLEAR ENGINEERING	408	369	39	281	266	15	121	116	5
ENGINEERING MECHANICS	185	170	15	126	115	11	57	56	1
ENVIRONMENTAL AND SANITARY ENGINEERING	275	216	59	485	384	101	34	33	1
NAVAL ARCHITECTURE AND MARINE ENGINEERING	556	536	20	80	78	2	4	4	
OCEAN ENGINEERING	200	187	13	91	85	6	13	13	---
ENGINEERING TECHNOLOGIES	11,713	11,038	675	323	284	39	10	10	
OTHER	1,074	978	96	95	82	13	12	11	1
FINE AND APPLIED ARTS, TOTAL	40,479	14,798	25,681	8,629	4,056	4,573	654	396	258
FINE ARTS, GENERAL	4,440	1,413	3,027	712	330	382	41	22	19
ART	12,617	4,042	8,575	2,109	973	1,136	11	5	6
ART HISTORY AND APPRECIATION	1,836	339	1,497	349	84	265	110	32	78
MUSIC (PERFORMING, COMPOSITION, THEORY)	5,342	2,624	2,718	2,690	1,346	1,344	276	199	77
MUSIC (LIBERAL ARTS PROGRAM)	3,086	1,369	1,717	514	278	236	85	59	26
MUSIC HISTORY AND APPRECIATION	229	110	119	128	65	63	20	13	7
DRAMATIC ARTS	5,334	2,123	3,211	1,275	635	640	97	62	35
DANCE	767	71	696	245	33	212	7		7
APPLIED DESIGN	4,564	1,373	3,191	260	119	141	2	1	1
CINEMATOGRAPHY	604	429	175	138	103	35	4	3	1
PHOTOGRAPHY	1,071	686	385	77	46	31	---	---	---
OTHER	589	219	370	112	44	88	1	---	1
FOREIGN LANGUAGES, TOTAL	10,319	2,520	7,799	2,104	694	1,410	588	274	314
FOREIGN LANGUAGES, GENERAL	758	199	559	398	130	268	172	83	89
FRENCH	3,178	552	2,626	460	92	368	115	35	80
GERMAN	1,286	385	901	294	119	175	79	37	42
ITALIAN	205	60	145	65	23	42	13	8	5
SPANISH	3,870	911	2,959	592	186	406	131	72	59
RUSSIAN	409	161	248	68	33	35	8	2	6
CHINESE	73	33	40	20	9	11	6	4	2
JAPANESE	123	48	75	16	5	11	1		1
LATIN	98	46	52	20	11	9	4	2	2
GREEK, CLASSICAL	89	48	41	16	10	6	---	---	---
HEBREW	53	21	32	29	24	5	1	1	---
ARABIC	6	2	4	7	5	2	---	---	---
INDIAN (ASIATIC)	1	1	---	2	2	---	4	4	---
SCANDINAVIAN LANGUAGES	45	14	31	10	2	8	2	1	1
SLAVIC LANGUAGES (OTHER THAN RUSSIAN)	43	15	28	57	27	30	24	12	12
AFRICAN LANGUAGES (NON-SEMITIC)	2		2	5	2	3	5	3	2
OTHER	80	24	56	45	14	31	23	10	13
HEALTH PROFESSIONS, TOTAL	63,649	10,519	53,130	16,515	4,316	12,199	842	475	367
HEALTH PROFESSIONS, GENERAL	5,572	1,802	3,770	907	405	502	80	53	27
HOSPITAL AND HEALTH CARE ADMINISTRATION	1,581	538	1,043	1,996	1,063	933	12	10	2
NURSING	32,794	1,654	31,140	5,096	197	4,899	113	4	109
DENTAL SPECIALTIES				377	320	57	10	8	2
MEDICAL SPECIALTIES				51	40	11	35	22	13
OCCUPATIONAL THERAPY	1,715	91	1,624	266	37	229	---	---	---
OPTOMETRY	326	252	74	9	7	2	2	2	
PHARMACY	6,640	3,730	2,910	336	216	120	108	91	17
PHYSICAL THERAPY	2,745	532	2,213	250	64	186	2	---	2
DENTAL HYGIENE	1,132	11	1,121	36	13	23	---	---	---
PUBLIC HEALTH	694	238	456	2,731	1,174	1,557	194	111	83
MEDICAL RECORD LIBRARIANSHIP	635	35	600	2	---	2	---	---	---
PODIATRY OR PODIATRIC MEDICINE	---	---	---	2	2	---	---	---	---
BIOMEDICAL COMMUNICATION	31	16	15	6	4	2	---	---	---
VETERINARY MEDICINE SPECIALTIES	---	---	---	147	107	40	73	56	17
SPEECH PATHOLOGY AND AUDIOLOGY	3,445	220	3,225	3,226	244	2,982	112	53	59
CHIROPRACTIC	129	107	22	---	---	---	---	---	---
CLINICAL SOCIAL WORK	301	55	246	511	165	346	15	6	9
MEDICAL LABORATORY TECHNOLOGIES	4,896	884	4,012	233	83	150	1	---	1
DENTAL TECHNOLOGIES	3	2	1	1	1	---	---	---	---
RADIOLOGIC TECHNOLOGIES	480	189	291	35	28	7	3	3	---
OTHER	530	163	367	297	146	151	82	56	26
HOME ECONOMICS, TOTAL	18,370	916	17,454	2,570	252	2,318	247	78	169
HOME ECONOMICS, GENERAL	5,802	128	5,674	836	30	806	73	11	62
HOME DECORATION AND HOME EQUIPMENT	958	51	907	26	1	25	---	---	---
CLOTHING AND TEXTILES	3,250	48	3,202	114	6	108	9	1	8
CONSUMER ECONOMICS AND HOME MANAGEMENT	739	60	679	78	2	76	17	3	14
FAMILY RELATIONS AND CHILD DEVELOPMENT	3,304	158	3,146	651	108	543	97	43	54
FOODS AND NUTRITION	3,235	209	3,026	748	81	667	44	16	28
INSTITUTIONAL MANAGEMENT AND CAFETERIA MANAGEMENT	584	250	334	59	10	49	---	---	---
OTHER	498	12	486	58	14	44	7	4	3
LAW, TOTAL	776	388	388	1,832	1,506	326	60	56	4
LAW, GENERAL	755	381	374	1,517	1,247	270	60	56	4
OTHER	21	7	14	315	259	56	---	---	---
LETTERS, TOTAL	40,028	16,107	23,921	8,301	3,229	5,072	1,790	1,010	780
ENGLISH, GENERAL	23,052	7,608	15,444	3,977	1,400	2,577	759	358	401
LITERATURE, ENGLISH	1,886	745	1,141	438	164	274	113	48	65
COMPARATIVE LITERATURE	332	116	216	187	66	121	124	56	68

SOURCE: National Center for Educational Statistics, Unpublished, 1982

TABLE 2-14

BACHELOR'S, MASTER'S AND DOCTOR'S DEGREES CONFERRED BY SEX AND FIELD, 1980-81
(Continued)

DISCIPLINE DIVISION AND SPECIALTY	BACHELOR'S DEGREES REQUIRING 4 OR 5 YEARS			MASTER'S DEGREES			DOCTOR'S DEGREES (PH.D.,ED.D.,ETC.)		
	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN
LETTERS, TOTAL—CONTINUED									
CLASSICS	403	203	200	88	42	46	50	31	19
LINGUISTICS	551	143	408	498	191	307	166	98	68
SPEECH, DEBATE, AND FORENSIC SCIENCE	5,044	2,359	3,685	967	302	665	139	73	66
CREATIVE WRITING	333	116	217	258	121	137	1	1	---
TEACHING OF ENGLISH AS A FOREIGN LANGUAGE	44	7	37	557	176	381	---	---	---
PHILOSOPHY	3,643	2,580	1,063	469	356	113	280	224	56
RELIGIOUS STUDIES	3,133	1,976	1,157	760	372	388	130	104	26
OTHER	607	254	353	102	39	63	28	17	11
LIBRARY SCIENCE, TOTAL	375	22	353	4,859	841	4,018	71	31	40
LIBRARY SCIENCE, GENERAL	366	20	346	4,786	829	3,957	63	28	35
OTHER	9	2	7	73	12	61	8	3	5
MATHEMATICS, TOTAL	11,078	6,342	4,736	2,567	1,692	875	728	614	114
MATHEMATICS, GENERAL	10,169	5,774	4,395	1,890	1,221	669	529	448	81
STATISTICS, MATHEMATICAL AND THEORETICAL	226	131	95	467	323	144	144	122	22
APPLIED MATHEMATICS	516	328	188	179	129	50	50	42	8
OTHER	167	109	58	31	19	12	5	2	3
MILITARY SCIENCES, TOTAL	305	293	12	43	43	---	--	---	---
MILITARY SCIENCE (ARMY)	6	4	2	43	43	---	---	---	---
NAVAL SCIENCE (NAVY, MARINES)	8	8	---	---	---	---	---	---	---
AEROSPACE SCIENCE (AIR FORCE)	1	1	---	---	---	---	---	---	---
MERCHANT MARINE	263	253	10	---	---	---	---	---	---
OTHER	27	27	---	---	---	---	---	---	---
PHYSICAL SCIENCES, TOTAL	23,952	18,064	5,888	5,284	4,200	1,084	3,141	2,765	376
PHYSICAL SCIENCES, GENERAL	958	772	186	98	75	23	23	21	2
PHYSICS, GENERAL	3,401	2,979	422	1,287	1,145	142	861	800	61
MOLECULAR PHYSICS	1	1							
NUCLEAR PHYSICS	39	29	10	7	4	3	5	5	---
CHEMISTRY, GENERAL	11,282	7,907	3,375	1,557	1,113	444	1,501	1,273	228
INORGANIC CHEMISTRY	24	15	9	11	7	4	12	8	4
ORGANIC CHEMISTRY	4		4	22	20	2	31	22	9
PHYSICAL CHEMISTRY	18	17	1	11	9	2	23	21	2
ANALYTICAL CHEMISTRY	3	2	1	15	7	8	19	15	4
PHARMACEUTICAL CHEMISTRY	16	12	4	38	28	10	36	32	4
ASTRONOMY	98	79	19	51	44	7	77	69	8
ASTROPHYSICS	31	24	7	7	5	2	13	13	
ATMOSPHERIC SCIENCES AND METEOROLOGY	359	302	57	174	154	20	52	49	3
GEOLOGY	5,010	3,737	1,273	1,275	980	295	237	210	27
GEOCHEMISTRY	7	4	3	21	13	8	15	14	1
GEOPHYSICS AND SEISMOLOGY	185	158	27	100	83	17	42	40	2
EARTH SCIENCES, GENERAL	904	647	257	129	97	32	48	39	9
PALEONTOLOGY	1	1	---	2	2	---	4	4	---
OCEANOGRAPHY	225	176	49	175	141	34	58	51	7
METALLURGY	35	30	5	58	52	6	21	20	1
OTHER EARTH SCIENCES	277	194	83	84	60	24	20	19	1
OTHER PHYSICAL SCIENCES	1,074	978	96	162	131	31	43	40	3
PSYCHOLOGY, TOTAL	40,833	14,295	26,538	7,998	3,358	4,640	2,955	1,681	1,274
PSYCHOLOGY, GENERAL	39,312	13,745	25,567	4,721	2,086	2,635	2,151	1,258	893
EXPERIMENTAL PSYCHOLOGY	55	33	22	62	30	32	64	34	30
CLINICAL PSYCHOLOGY	21	5	16	662	305	357	56	239	217
PSYCHOLOGY FOR COUNSELING	210	65	145	1,819	655	1,164	153	79	74
SOCIAL PSYCHOLOGY	564	266	298	222	103	119	40	18	22
PSYCHOMETRICS	---	---	---	34	8	26	3	1	2
STATISTICS IN PSYCHOLOGY	1	---	1	13	3	10	1	1	---
INDUSTRIAL PSYCHOLOGY	46	25	21	100	58	42	13	9	4
DEVELOPMENTAL PSYCHOLOGY	230	26	204	211	69	142	44	23	21
PHYSIOLOGICAL PSYCHOLOGY	58	24	34	1	1		26	15	11
OTHER	336	106	230	153	40	113	4	4	
PUBLIC AFFAIRS AND SERVICES, TOTAL	36,311	15,266	21,045	20,074	8,957	11,117	433	260	173
COMMUNITY SERVICES, GENERAL	1,609	486	1,123	566	246	320	44	22	22
PUBLIC ADMINISTRATION	2,016	1,224	792	6,680	4,380	2,300	118	94	24
PARKS AND RECREATION MANAGEMENT	5,729	2,223	3,506	643	303	340	42	30	12
SOCIAL WORK AND HELPING SERVICES	12,410	2,107	10,303	10,240	2,614	7,626	193	89	104
LAW ENFORCEMENT AND CORRECTIONS	13,707	8,703	5,004	1,538	1,140	398	21	13	8
INTERNATIONAL PUBLIC SERVICE	168	92	76	90	54	36	8	5	3
OTHER	672	431	241	317	220	97	7	7	
SOCIAL SCIENCES, TOTAL	100,647	56,156	44,491	11,917	7,442	4,475	3,119	2,272	847
SOCIAL SCIENCES, GENERAL	8,167	4,006	4,161	1,189	686	503	69	53	16
ANTHROPOLOGY	3,330	1,222	2,108	868	366	502	358	218	140
ARCHAEOLOGY	74	23	51	24	8	16	15	5	10
ECONOMICS	18,753	13,036	5,717	1,911	1,467	444	727	627	100
HISTORY	18,301	11,363	6,938	2,237	1,330	907	543	444	199
GEOGRAPHY	3,273	2,184	1,089	562	410	152	119	95	24
POLITICAL SCIENCE AND GOVERNMENT	24,977	15,796	9,181	1,875	1,342	533	484	388	96
SOCIOLOGY	17,272	5,247	12,025	1,240	590	650	610	371	239
CRIMINOLOGY	2,247	1,303	944	268	234	34	7	7	
INTERNATIONAL RELATIONS	1,956	924	1,032	884	595	289	47	41	6
AFRO-AMERICAN (BLACK CULTURE) STUDIES	182	72	110	37	24	13	4	2	2
AMERICAN INDIAN CULTURAL STUDIES	33	13	20	---	---	---	---	---	---
MEXICAN - AMERICAN CULTURAL STUDIES	87	32	55	25	15	10	1	1	---
URBAN STUDIES	1,217	603	614	640	320	320	22	13	9
DEMOGRAPHY	10	4	6	14	8	6	3	1	2

SOURCE: National Center for Educational Statistics, Unpublished, 1982

TABLE 2-14

BACHELOR'S, MASTER'S AND DOCTOR'S DEGREES CONFERRED BY SEX AND FIELD, 1980-81
(Continued)

DISCIPLINE DIVISION AND SPECIALTY	BACHELOR'S DEGREES REQUIRING 4 OR 5 YEARS			MASTER'S DEGREES			DOCTOR'S DEGREES (PH.D.,ED.D.,ETC.)		
	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN
1	2	3	4	5	6	7	8	9	10
SOCIAL SCIENCES, TOTAL—CONTINUED									
OTHER	768	328	440	143	47	96	10	6	4
THEOLOGY, TOTAL	5,841	4,358	1,483	4,220	2,801	1,419	1,276	1,175	101
THEOLOGICAL PROFESSIONS, GENERAL	3,693	3,147	526	2,499	1,879	620	1,195	1,104	91
RELIGIOUS MUSIC	300	171	129	209	151	58	18	16	2
BIBLICAL LANGUAGES	33	31	2	57	46	11	3	1	2
RELIGIOUS EDUCATION	1,510	777	733	1,277	623	654	28	25	3
OTHER	305	212	93	178	102	76	32	29	3
INTERDISCIPLINARY STUDIES, TOTAL	34,491	16,884	17,607	4,519	2,721	1,798	279	170	109
GENERAL (LIBERAL ARTS AND SCIENCES)	18,596	8,493	10,103	1,085	410	675	23	10	13
BIOLOGICAL AND PHYSICAL SCIENCES	3,591	2,297	1,294	284	178	106	41	38	3
HUMANITIES AND SOCIAL SCIENCES	3,047	1,216	1,831	1,290	784	506	98	51	47
ENGINEERING AND OTHER DISCIPLINES	386	327	59	980	897	83	19	15	4
OTHER	8,871	4,551	4,320	880	452	428	98	56	42

Source: Data on Earned Degrees Conferred by Institutions of Higher Education by Race, Ethnicity and Sex, Academic Year 1980-81, U.S. Dept. of Education, Office for Civil Rights

TABLE 2-15

DEGREES BY RACE, ETHNICITY, SEX AND FIELD, 1980-81

Major Field of Study		White non-Hispanic		Black non-Hispanic		Hispanic		Asian/Pac. Islander		Am. Indian/ Alaskan Nat.		Nonresident Alien	
	Total	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
BACHELOR'S DEGREES													
ALL FIELDS	934,800	406,173	401,146	24,511	36,162	10,810	11,022	10,107	8,687	1,700	1,893	16,324	6,265
Agric./Nat. Resources	21,886	13,908	6,326	259	121	181	67	200	112	81	15	525	91
Architec./Environ. Design	9,455	5,778	2,291	210	90	203	67	217	79	20	4	372	124
Area Studies	2,585	900	1,342	20	47	41	63	39	79	3	1	28	22
Biological Sciences	43,216	21,085	16,191	954	1,315	648	496	830	659	67	70	565	336
Business/Management	200,857	112,267	61,931	6,503	6,897	2,560	1,554	2,121	1,822	388	248	3,219	1,347
Communications	31,282	12,541	14,932	980	1,425	258	299	153	215	51	59	196	173
Computer/Inform. Sciences	15,120	8622	3,943	394	392	193	109	410	259	17	4	566	211
Education	108,265	22,876	70,848	2,587	6,907	754	2,093	258	465	164	405	430	478
Engineering	74,954	54,453	6,395	2,020	429	1,302	131	2,699	367	173	22	6,608	355
Fine & Applied Arts	40,241	12,768	23,165	811	1,024	345	434	289	499	73	114	338	381
Foreign Languages	10,319	2,067	6,547	76	217	258	651	39	171	10	15	70	198
Health Professions	63,649	9,276	47,514	436	3,167	262	891	299	1,013	39	170	207	375
Home Economics	18,370	745	15,515	83	1,042	17	213	41	354	1	72	29	258
Law	776	368	363	9	13	4	6	2	3	1	1	4	2
Letters	40,028	14,748	21,567	666	1,314	278	416	167	293	44	59	204	272
Library Science	375	18	321	2	28	1	-	-	2	1	1	-	1
Mathematics	11,078	5,422	4,023	276	308	113	72	223	168	10	8	298	157
Military Sciences	305	278	11	5	1	3	-	4	-	1	-	2	-
Physical Sciences	23,950	16,124	5,122	613	293	297	108	412	184	44	21	572	160
Psychology	40,833	12,215	22,486	1,040	2,268	490	815	293	546	68	128	189	295
Public Affairs/Services	36,311	12,476	16,834	1,726	3,143	590	586	187	229	91	133	196	120
Social Sciences	100,647	48,509	37,026	3,696	4,433	1,549	1,339	860	785	241	233	1,301	675
Theology	5,807	3,964	1,388	142	24	74	14	43	15	5	-	106	32
Interdisciplinary Studies	34,491	14,765	15,065	1,003	1,264	389	598	321	368	107	110	299	202
MASTER'S DEGREES													
ALL FIELDS	294,183	115,562	125,654	6,158	10,975	3,085	3,376	3,773	2,509	501	533	16,587	5,470
Agric./Nat. Resources	4,003	2,298	785	53	20	50	13	50	17	4	3	606	104
Architec./Environ. Design	3,153	1,667	724	74	48	52	13	75	37	4	1	362	96
Area Studies	718	260	272	2	12	18	21	11	27	3	3	41	48
Biological Sciences	5,978	3,223	1,987	82	89	36	33	62	33	9	6	242	126
Business/Management	57,541	35,380	12,094	1,554	805	676	193	1,161	471	128	27	4,146	905
Communications	3,105	1,183	1,373	65	122	24	19	30	36	3	6	143	101
Computer/Inform. Sciences	4,143	2,153	665	52	18	45	15	205	74	10	2	711	193
Education	98,380	23,291	59,488	2,061	6,584	869	1,962	291	682	159	294	1,408	1,291
Engineering	16,358	9,177	970	222	38	251	27	974	105	26	5	4,348	215
Fine & Applied Arts	8,629	3,534	4,090	149	118	77	55	68	92	9	13	219	205
Foreign Languages	2,104	541	1,095	10	23	60	114	7	19	1	7	75	152
Health Professions	16,515	3,443	10,732	197	692	86	165	164	284	17	37	409	289
Home Economics	2,570	193	1,998	11	121	5	26	7	56	1	9	35	108

TABLE 2-15 (continued)

DEGREES BY RACE, ETHNICITY, SEX AND FIELD, 1980-81

Major Field of Study		White non-Hispanic		Black non-Hispanic		Hispanic		Asian/Pac. Islander		Am. Indian/ Alaskan Nat.		Nonresident Alien	
	Total	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
MASTER'S DEGREES continued													
Law	1,832	1,129	237	27	11	42	10	32	5	1	-	275	63
Letters	8,301	2,768	4,440	72	178	48	83	44	70	8	10	289	291
Library Science	4,859	733	3,591	33	183	9	49	13	56	1	16	52	123
Mathematics	2,565	1,212	678	33	34	31	9	64	33	6	1	344	120
Physical Sciences	5,227	3,255	860	79	28	45	10	115	38	9	2	641	145
Psychology	7,998	2,945	4,071	164	260	78	101	34	43	13	19	124	146
Public Affairs/Services	20,074	7,212	9,223	713	1,180	310	319	149	157	47	45	526	193
Social Sciences	11,917	5,571	3,579	311	304	181	99	147	86	28	16	1,204	391
Theology	3,728	2,119	1,163	58	13	36	14	39	16	1	-	208	61
Interdisciplinary Studies	4,485	2,275	1,539	136	94	56	26	31	21	13	11	179	104
PH.D. DEGREES*													
ALL FIELDS	32,839	17,310	8,598	694	571	277	179	655	222	95	35	3,564	639
Agric./Nat. Resources	1,067	577	87	14	1	14	-	22	7	2	-	311	32
Architec/Environ. Design	93	39	17	5	1	2	-	5	-	-	-	22	2
Area Studies	157	73	51	6	-	1	-	5	1	1	-	14	5
Biological Sciences	3,718	2,288	889	36	28	30	10	93	47	5	3	214	75
Business/Management	844	519	100	26	6	1	1	19	6	5	-	149	12
Communications	182	84	63	3	7	-	-	2	-	1	-	17	5
Computer/Infor. Sciences	252	162	22	1	-	-	-	14	-	1	-	49	3
Education	7,900	3,299	3,092	289	325	66	74	48	57	41	16	421	172
Engineering	2,551	1,296	56	23	1	22	1	182	9	5	-	919	37
Fine/Applied Arts	654	353	234	12	5	2	2	3	4	1	1	25	12
Foreign Languages	588	205	265	4	5	19	18	5	-	1	-	40	26
Health Professions	842	380	309	9	17	3	5	18	7	3	3	62	26
Home Economics	247	65	141	3	6	-	1	1	5	-	1	9	15
Law	60	37	3	1	-	1	-	-	-	-	-	17	1
Letters	1,790	854	695	28	28	6	8	16	6	5	2	101	41
Library Science	71	22	29	3	6	-	1	1	2	-	-	5	2
Mathematics	728	422	85	6	3	4	2	24	7	2	-	156	17
Physical Sciences	3,140	2,153	292	28	4	21	2	90	16	3	1	469	61
Psychology	2,955	1,488	1,149	62	54	34	31	18	15	7	3	72	22
Public Affairs/Services	433	205	125	19	33	6	4	6	5	1	1	23	5
Social Sciences	3,119	1,751	714	66	34	37	15	48	24	9	3	361	57
Theology	1,169	903	90	45	-	7	-	33	-	1	-	82	8
Interdisciplinary Studies	279	135	90	5	7	1	4	2	4	1	1	26	3

* Includes Ed.D. and comparable degrees at the doctoral level. Excludes first-professional degrees.

NOTE: This tabulation excludes 116 men and 3 women whose racial/ethnic group was not reported.

SOURCE: Data on Earned Degrees Conferred by Institutions of Higher Education, by Race, Ethnicity and Sex, 1980-81, U.S. Dept. of Education, Office for Civil Rights

TABLE 2-16

SCIENCE AND ENGINEERING DEGREES BY LEVEL, FIELD AND MINORITY, 1981

FIELD	BACHELOR'S				MASTER'S				PH. D.'S			
	Total	Black	Asian	Hispanic	Total	Black	Asian	Hispanic	Total	Black	Asian	Hispanic
All S/E Fields	331,684	18,811	9,007	7,910	58,189	1,787	2,130	1,024	17,530	361	616	224
Physical Sciences	23,950	906	596	405	5,227	107	153	55	3,140	32	106	24
Math Sciences	11,078	584	391	185	2,565	67	97	40	728	9	31	6
Computer Specialties	15,120	786	669	302	4,143	70	279	60	252	1	14	0
Engineering	74,954	2,449	3,066	1,433	16,358	260	1,079	278	2,551	24	191	23
Life Sciences	65,102	2,649	1,801	1,392	9,981	244	212	132	4,785	79	169	54
Psychology	40,833	3,308	839	1,305	7,998	424	77	179	2,955	116	33	65
Social Sciences	100,647	8,129	1,645	2,888	11,917	615	233	280	3,119	100	72	52
					PERCENTS							
All S/E Fields	100.00	5.67	2.72	2.38	100.00	3.07	3.66	1.76	100.00	2.06	3.52	1.28
Physical Sciences	100.00	3.78	2.49	1.69	100.00	2.05	2.93	1.05	100.00	1.02	3.38	0.76
Math Sciences	100.00	5.27	3.53	1.67	100.00	2.61	3.78	1.56	100.00	1.24	4.26	0.82
Computer Specialties	100.00	5.20	4.42	2.00	100.00	1.69	6.73	1.45	100.00	0.40	5.56	0.00
Engineering	100.00	3.27	4.09	1.91	100.00	1.59	6.60	1.70	100.00	0.94	7.49	0.90
Life Sciences	100.00	4.07	2.77	2.14	100.00	2.44	2.12	1.32	100.00	1.65	3.53	1.13
Psychology	100.00	8.10	2.05	3.20	100.00	5.30	0.96	2.24	100.00	3.93	1.12	2.20
Social Sciences	100.00	8.08	1.63	2.87	100.00	5.16	1.96	2.35	100.00	3.21	2.31	1.67

SOURCE: Earned Degrees Series, National Center for Education Statistics, Unpublished

TABLE 2-17

SCIENCE AND ENGINEERING DEGREES AWARDED - 1981						
Field	Bachelor's		Master's		Ph.D.'s	
	Total	Women	Total	Women	Total	Women
Agriculture/Nat. Resources	21,886	6,732	4,003	942	1,067	127
Biological Sciences	43,216	19,067	5,978	2,324	3,718	1,052
Computer/Info. Sciences	15,121	4,919	4,218	971	252	25
Engineering	63,287	7,024	16,386	1,323	2,551	104
Engr. Technologies	11,713	675	323	39	10	-
Mathematics	11,078	4,736	2,567	875	728	114
Physical Sciences	23,952	5,888	5,284	1,084	3,141	376
Physics	3,441	433	1,294	115	866	61
Chemistry	11,347	3,403	1,654	472	1,622	251
Astronomy	129	26	58	9	90	8
Meteorology	359	57	174	20	52	3
Geosciences	6,107	1,560	1,527	352	346	39
Oceanography	225	49	175	34	58	7
Psychology	40,833	26,538	7,998	4,640	2,955	1,274
Social Sciences	100,647	44,491	11,917	4,475	3,119	847
Anthropology	3,330	2,108	868	502	358	140
Economics	18,753	5,717	1,911	444	727	100
Political Science	24,977	9,181	1,875	533	484	96
Sociology	17,272	12,025	1,240	650	610	239
Total S/E Fields	295,418	104,610	52,651	14,327	16,601	3,647
Total All Fields	935,140	465,257	295,739	148,696	32,958	10,247

SOURCE: Women and Minorities in Science and Engineering, National Science Foundation, 1982 and Earned Degrees, 1981, National Center for Education Statistics, Unpublished

TABLE 2-18

GRADUATE DEGREE ATTAINMENT RATES, BY SEX, 1972-80

Bachelor's degrees		Master's degrees		Attainment rate	Bachelor's degrees		Doctoral degrees		Attainment rates
Year	Number	Year	Number		Year	Number	Year	Number	
					Men				
1970	195,244	1972	44,010	22.5	1965	128,723	1972	16,502	12.8
1971	198,180	1973	44,474	22.4	1966	133,989	1973	16,310	12.2
1972	203,557	1974	43,630	21.4	1967	143,847	1974	15,453	10.7
1973	211,552	1975	42,847	20.3	1968	158,711	1975	15,147	9.5
1974	213,269	1976	42,675	20.0	1969	181,323	1976	14,502	8.0
1975	201,578	1977	43,577	21.6	1970	195,244	1977	13,979	7.2
1976	196,577	1978	42,547	21.6	1971	198,180	1978	13,157	6.6
1977	191,099	1979	40,416	21.2	1972	203,557	1979	13,053	6.4
1978	188,107	1980	40,010	21.3	1973	211,552	1980	13,399	6.3
1979	186,333	1981	39,152	21.0	1974	213,269	1981	13,017	6.1
					Women				
1970	68,878	1972	9,557	13.9	1965	36,213	1972	1,910	5.3
1971	72,996	1973	9,760	13.4	1966	39,482	1973	2,288	5.8
1972	77,671	1974	10,545	13.6	1967	44,002	1974	2,412	5.5
1973	83,839	1975	11,005	13.1	1968	53,463	1975	2,637	4.9
1974	91,793	1976	12,072	13.2	1969	63,196	1976	2,786	4.4
1975	93,342	1977	13,154	14.1	1970	68,878	1977	2,958	4.3
1976	95,597	1978	13,690	14.3	1971	72,996	1978	3,039	4.2
1977	97,453	1979	14,040	14.4	1972	77,671	1979	3,310	4.3
1978	100,060	1980	14,453	14.4	1973	83,839	1980	3,796	4.5
1979	102,292	1981	15,809	15.5	1974	91,793	1981	3,741	4.1

SOURCE: Earned Degrees Conferred Series, 1965-1981, National Center for Education Statistics; using National Science Foundation Field Definitions

TABLE 2-19

SCIENCE AND ENGINEERING MASTER'S DEGREES BY SEX AND YEAR, 1965-1981

YEAR	ALL MASTER'S DEGREES					
	Total	Physical Sciences[1]	Engineering	Mathematical/ Computer Sciences	Life Sciences	Social Sciences[2]
1965	33,835	4,918	12,056	4,294	5,978	6,589
1966	38,083	4,992	13,678	5,010	6,666	7,737
1967	41,800	5,412	13,885	5,733	7,465	9,305
1968	45,425	5,508	15,188	6,081	8,315	10,333
1969	48,425	5,911	15,243	6,735	8,809	11,727
1970	49,318	5,948	15,597	7,107	8,590	12,076
1971	50,624	6,386	16,347	6,789	8,320	12,782
1972	53,567	6,307	16,802	7,186	8,914	14,358
1973	54,234	6,274	16,758	7,146	9,080	14,976
1974	54,175	6,087	15,393	7,116	9,605	15,974
1975	53,852	5,830	15,434	6,637	9,618	16,333
1976	54,747	5,485	16,170	6,466	9,823	16,803
1977	56,731	5,345	16,889	6,496	10,707	17,294
1978	56,237	5,576	17,015	6,421	10,711	16,514
1979	54,456	5,464	16,193	6,101	10,719	15,979
1980	54,391	5,233	16,846	6,515	10,278	15,519
1981	54,961	5,038	17,481	6,785	9,398	16,259
1982						
	DEGREES AWARDED TO WOMEN					
1965	4,082	513	44	812	1,162	1,551
1966	4,882	528	76	1,018	1,380	1,880
1967	5,717	553	78	1,310	1,517	2,259
1968	6,512	635	99	1,361	1,864	2,553
1969	7,314	668	113	1,566	2,016	2,951
1970	8,577	847	172	1,809	2,216	3,533
1971	8,658	853	187	1,688	2,190	3,740
1972	9,557	888	281	1,777	2,327	4,284
1973	9,760	847	288	1,730	2,237	4,658
1974	10,545	887	362	1,793	2,410	5,093
1975	11,005	848	396	1,766	2,411	5,584
1976	12,072	825	589	1,690	2,619	6,349
1977	13,154	887	733	1,766	3,011	6,757
1978	13,690	946	871	1,717	3,226	6,930
1979	14,040	992	990	1,632	3,460	6,966
1980	14,383	975	1,190	1,800	3,326	7,092
1981	15,809	1,029	2,418	1,846	3,155	7,361
1982						

[1] Includes environmental science

[2] Includes psychology

SOURCE: Series of Earned Degrees Conferred, National Center for Education Statistics; and Series of Doctorate Recipients from U.S. Universities, National Academy of Sciences

TABLE 2-20

NUMBER AND PROPORTION OF DEGREES IN SCIENCE EARNED BY WOMEN, 1960-1981

FIELD	BACHELOR'S DEGREES			DOCTORATES		
	Total	Women	% W	Total	Women	% W
Social Sciences*	1,356,160	488,781	36.0	41,500	7,085	17.1
Psychology	684,440	350,270	51.2	42,678	15,092	35.4
Life Sciences	1,014,986	293,601	28.9	68,754	11,818	17.2
Math/Stat/Comp.	464,127	164,020	35.3	22,864	2,020	8.8
Physical Science	393,826	67,693	17.2	71,756	4,758	6.6
TOTAL SCIENCE	3,913,539	1,364,365	34.9	247,652	40,773	16.5
Engineering	924,201	30,643	3.3	54,269	695	1.3
TOTAL SCIENCE & ENGINEERING	4,837,740	1,395,008	28.8	301,821	41,468	13.7

* Sociology, Anthropology, Economics, Political Science and Government

TABLE 2-21

SCIENCE AND ENGINEERING BACHELOR'S DEGREES, 1965-1981

YEAR	All Bachelor's Degrees					
	Total S/E	Physical Sciences[1]	Engi - neering	Math Sciences[2]	Life Sciences	Social Sciences[3]
1965	164,936	17,916	36,795	19,668	34,842	55,715
1966	173,471	17,186	35,815	20,182	36,864	63,424
1967	187,849	17,794	36,188	21,530	39,408	72,929
1968	212,174	19,442	37,614	24,084	43,260	87,774
1969	244,519	21,591	41,553	28,263	48,713	104,399
1970	264,122	21,551	44,772	29,109	52,129	116,561
1971	271,176	21,549	45,387	27,306	51,461	125,473
1972	281,228	20,887	46,003	27,250	53,484	133,604
1973	295,391	20,809	46,989	27,528	59,486	140,579
1974	305,062	21,287	43,530	26,570	68,226	145,449
1975	294,920	20,896	40,065	23,385	72,710	137,864
1976	292,174	21,559	39,114	21,749	77,301	132,451
1977	288,543	22,618	41,581	20,729	78,472	125,143
1978	288,167	23,175	47,411	19,925	77,138	120,518
1979	288,625	23,363	53,720	20,670	75,085	115,787
1980	292,271	23,682	59,903	22,594	71,630	114,462
1981	286,262	22,601	63,287	26,199	63,241	110,934
	Degrees Awarded to Women					
1965	36,213	2,532	139	6,453	8,277	18,812
1966	39,482	2,333	146	6,702	8,464	21,837
1967	44,002	2,402	184	7,334	8,948	25,134
1968	53,463	2,674	211	8,841	10,091	31,646
1969	63,196	2,952	313	10,348	11,308	38,275
1970	68,878	2,969	338	10,516	11,875	43,180
1971	72,996	3,014	365	9,818	11,803	47,996
1972	77,671	3,148	501	9,784	12,694	51,544
1973	83,839	3,121	580	9,985	14,570	55,583
1974	91,793	3,536	706	9,719	17,836	59,996
1975	93,342	3,838	860	8,656	20,811	59,177
1976	95,597	4,139	1,443	7,678	23,789	58,584
1977	97,453	4,551	2,086	7,488	25,609	57,719
1978	100,060	4,987	3,497	7,110	26,954	57,512
1979	102,292	5,287	4,919	7,421	27,548	57,117
1980	105,784	5,647	6,072	8,221	27,606	58,238
1981	105,310	5,709	7,024	9,655	25,492	57,430

1 Includes Environmental Science
2 Includes Computer Specialties
3 Includes Psychology

SOURCE: Projections of Education Statistics to 1988-89 National Center for Education Statistics, 1980

TABLE 2-22

PROJECTIONS OF SCIENCE AND ENGINEERING BACHELOR'S DEGREES, BY FIELD, SEX AND YEAR, 1981-1989

YEAR	All Bachelor's Degrees					
	Total S/E	Physical Sciences[1]	Engineering	Math Sciences[2]	Life Sciences	Social Sciences[3]
1981	299,664	24,660	68,210	16,850	81,630	108,310
1982	307,382	25,410	76,060	17,070	83,910	104,930
1983	305,527	26,370	75,130	17,620	84,650	101,760
1984	299,768	26,190	73,400	17,750	84,630	97,800
1985	292,064	25,610	71,470	17,730	83,940	93,310
1986	287,114	25,310	69,330	17,820	83,900	90,750
1987	279,021	24,780	67,060	17,780	82,910	86,490
1988	275,094	24,590	65,490	18,040	82,940	84,030
1989	272,964	24,740	64,340	18,290	83,580	82,010
	Projections for Women					
1981	92,500	5,840	6,210	5,340	28,420	52,320
1982	102,070	6,360	7,610	5,490	29,820	52,790
1983	100,240	6,580	7,390	5,570	30,110	50,590
1984	97,950	6,740	7,130	5,620	30,300	48,160
1985	94,880	6,620	6,810	5,830	30,170	45,450
1986	95,840	6,990	6,810	6,130	31,040	44,870
1987	93,260	6,980	6,530	6,270	30,960	42,520
1988	93,110	7,170	6,460	6,530	31,410	41,540
1989	93,530	7,560	6,420	6,670	32,190	40,690

TABLE 2-23

PROJECTIONS OF SCIENCE AND ENGINEERING DOCTORAL DEGREES, BY FIELD, SEX AND YEAR, 1981-1989

YEAR	All Doctoral Degrees					
	Total S/E	Physical Sciences[1]	Engineering	Math Sciences[2]	Life Sciences	Social Sciences[3]
1981	17,320	2,960	2,300	890	4,610	6,560
1982	17,100	2,850	2,330	830	4,600	6,490
1983	16,530	2,780	2,270	810	4,460	6,210
1984	16,110	2,730	2,230	800	4,350	6,000
1985	15,710	2,660	2,170	780	4,220	5,880
1986	15,390	2,610	2,130	770	4,120	5,760
1987	15,080	2,560	2,090	750	4,020	5,660
1988	14,810	2,570	2,050	730	3,920	5,540
1989	14,400	2,450	2,000	710	3,820	5,420
	Projections for Women					
1981	3,450	320	50	140	950	1,990
1982	3,350	310	50	140	920	1,930
1983	3,250	300	50	130	900	1,870
1984	3,210	300	50	130	890	1,840
1985	3,160	290	50	130	870	1,820
1986	3,110	290	50	130	860	1,780
1987	3,060	280	50	120	850	1,760
1988	3,020	280	50	120	840	1,730
1989	2,960	280	50	110	830	1,690

1 Includes Environmental Sciences
2 Includes Computer Specialties
3 Includes Psychology

CHAPTER 3

GENERAL PROFESSIONS

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FIELD: Professional Fields

SOURCE: Summary table derived from information throughout Professional Women and Minorities

TABLE 3-1

APPROXIMATE PERCENTAGES OF WOMEN AND MINORITIES ENROLLED, GRADUATING AND WORKING IN THE PROFESSIONS

PROFESSION	WOMEN					MINORITIES				
	ENROLLMENTS		LATEST DEGREES		LABOR FORCE	ENROLLMENTS		LATEST DEGREES		LABOR FORCE
	1st Year	Total	Bachelor's/ 1st Prof.	Advan.	Total	1st Year	Total	Bachelor's/ 1st Prof.	Advan.	Total
Accountants			36.2	27.5	38.1			9.0	7.6	12.2
Business Managers	43.7[1]	30.0[2]	36.7	24.9	26.9	17.7[1]	9.6[2]	11.0	9.7	9.7
Architects	28.4[1]	28.4	28.1	28.9	8.3	12.9[1]	12.2	9.4	9.7	10.9
Engineers	15.8	14.5	12.2	7.5	3.9	14.1	12.0	8.8	6.7	9.2
Lawyers	37.2	35.3	32.6	16.1	13.8	10.2	8.7	7.0	2.0	5.5
Journalists			59.2	52.5	50.0			11.0	9.7	5.7
Physicians	30.8	27.9	25.0		13.4	15.4	14.0	10.7		17.4
Dentists	22.2	20.0	15.6		6.7	15.0	12.6	9.1		7.5
Optometrists	26.7	23.7	20.1		8.3		9.8	6.1		5.3
Osteopaths	23.9	20.9	18.3		10.6	6.8	5.7	4.4		9.0
Podiatrists	20.7	16.4	10.5		8.4		10.2	6.9		5.6
Veterinarians	50.0	46.4	35.4		13.3	5.1	4.4	3.6		4.1
Pharmacists	53.2	50.6	47.0	30.9	24.0		20.4	23.7	15.7	10.4
Clerics & Theologians			13.9		5.8			6.6	4.4	9.2
Librarians & Archivists			94.1	82.3	80.0			9.6	7.6	12.2

[1] Undergraduate
[2] Graduate

SOURCE: Doctorates Awarded 1920 to 1971 by Subfield of Doctorate, Sex and Decade, National Research Council, March 1973. Doctorate Recipients from United States Universities Summary Reports, 1972 - 1981, National Research Council

TABLE 3-2

DOCTORATES AWARDED FROM 1920 TO 1981 BY SUBFIELD OF DOCTORATE AND SEX

	CY1920-FY1972			FY1973-FY1977			FY1978-FY1979			FY 1980			FY 1981		
	Total	Women	% Women	Total	Women	% Women	Total	Women	% Women	Total	Women	% Women	Total	Women	% Women
Professional Fields, Total	16,048	1,777	11.1	7,310	1,206	16.5	2,863	693	24.2	1,345	375	27.9	1,388	424	30.5
Religion and Theology	4,761	260	5.5	1,069	82	7.7	416	32	7.7	189	13	6.9	201	22	10.9
Business Administration[1]	6,399	170	2.7	3,766	163	4.3	1,423	147	10.3	633	91	14.4	622	90	14.5
Home Economics	690	653	94.7	278	245	88.1	169	147	87.0	90	77	85.6	85	70	82.4
Journalism[2]	406	32	7.9	94	11	11.7	39	9	23.1	18	4	22.2	18	6	33.3
Law, Jurisprudence	1,215	56	4.3	133	7	5.3	45	2	4.4	21	1	4.8	28	1	3.6
Library & Archival Science	[illegible]	140	32.7	312	127	40.7	123	50	40.7	65	38	58.5	62	38	61.3
Architecture[3]	[illegible]	4	7.0												
Social work	886	314	35.4	683	333	48.8	327	151	46.2	178	81	45.5	209	110	52.6
Speech & Hearing Sciences[4]	504	127	25.2	702	264	37.6	282	147	52.1	123	67	54.5	140	84	60.0
Professional Fields, Other[4]	90	5	5.6	262	64	24.4	44	8	18.2	28	3	10.7	23	3	13.0

1 Originally "Business & Commerce, Business Administration." Changed to "Business Administration" in 1962.
2 Originally "Writing & Journalism." Changed to "Journalism" in 1962.
3 Dropped in 1962.
4 Added in 1968.

SOURCE: Earned Degrees Conferred Series, National Center for Education Statistics, 1947-48 - 1981-82; Journal of American Medical Association, Vol. 238, No. 26, December 26, 1977; Vol. 243, No. 9, March 1980; Vol. 246, No. 25, December 25, 1981; Vol. 248, No. 24, December 24/31 1982, copyright by the American Medical Association; A Review of Legal Education in the United States, Fall 1977, Fall 1979, and 1981-82, American Bar Association; and the American Veterinary Medicine Association, personal communication.

TABLE 3-3

FIRST PROFESSIONAL DEGREES CONFERRED BY FIELD AND SEX, SELECTED YEARS 1947-48 - 1981-82

YEAR		MEDICINE		DENTISTRY		OPTOMETRY		OSTEO-PATHY		PODIATRY		VETERINARY MEDICINE		LAW		THEOLOGY		ARCHI-TECTURE		PHARMACY	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1947-48	T	6,714		1,625		1,425						242		10,990				1,074		2,104	
	W	744	11.1	37	2.3	40	2.8					13	5.4	420	3.8			131	12.2	449	21.3
1949-50	T	5,612		2,579		1,801		346				803		14,312		3,221		2,563		5,751	
	W	584	10.4	18	0.7	19	1.1	19	5.5			12	1.5	421	3.0	211	6.6	122	4.8	441	7.7
1953-54	T	6,757		3,102		706		499				803		9,298		4,463		1,623		3,885	
	W	343	9.1	39	0.8	20	2.8	10	2.2			10	1.2	322	3.5	119	2.7	92	5.7	343	8.8
1957-58	T	6,861		3,065		264		466				809		9,394		4,989		1,612		3,782	
	W	351	5.1	34	0.9	1	0.4	6	1.3			13	1.6	272	2.9	61	1.2	76	4.7	391	10.3
1959-60	T	7,074		3,247		339		423				825		9,240		5,184		1,801		3,492	
	W	394	5.9	26	0.8	4	1.2	8	1.9			18	2.2	230	2.5	87	1.6	57	3.3	416	13.5
1963-64	T	7,342		3,196		305		352				852		10,679		4,423		2,059		2,207	
	W	432	6.3	14	0.4	5	1.7	4	1.1			32	3.9	307	2.9	65	1.5	78	3.9	254	11.5
1965-66	T	7,720		3,264		380		360		136		922		13,246		4,124		2,599		3,763	
	W	516	7.2	35	1.1	3	0.8	5	1.4	2	1.5	52	6.0	470	3.5	74	1.8	103	4.6	536	16.6
1970-71	T	8,986		3,777		531		472		241		1,252		17,652		5,055		5,578		4,593	
	W	829	9.2	46	1.2	13	2.4	11	2.3	5	2.0	98	7.8	1,293	7.3	118	2.3	667	12.0	951	25.2
1972-73	T	10,398		5,086		771		523		259		1,299		27,484		5,291		6,980		5,079	
	W	939	9.0	58	1.4	20	2.6	15	2.9	1	0.4	133	10.2	2,224	8.1	182	3.4	923	13.2	1,277	25.1
1974-75	T	12,550		4,809		792		665		353		1,415		29,497		5,098		8,238		6,487	
	W	1,654	13.2	149	3.1	40	5.1	35	5.3	4	1.1	225	15.9	4,455	15.1	348	6.8	1,435	17.4	1,821	28.1
1975-76	T	13,240		5,478		343		818		74		1,532		32,535		5,520		9,146		6,869	
	W	2,200	16.2	249	4.5	58	16.9	59	7.2	2	2.7	277	18.1	6,264	19.3	511	9.3	1,750	19.1	2,027	29.5
1976-77	T	13,599		5,138		953		852		486		1,586		34,104		5,861		9,222		7,495	
	W	2,611	19.2	374	7.3	105	11.0	75	8.8	16	3.3	362	22.8	7,657	22.5	554	9.5	1,973	21.4	2,434	32.5
1977-78	T	14,279		5,189		1,014		944		543		1,635		34,402		6,367		9,266		7,296	
	W	3,069	21.5	566	10.9	133	13.1	118	12.5	26	4.3	401	24.5	8,945	26.0	722	11.3	2,199	23.7	2,584	35.4
1978-79	T	14,925		5,488		1,046		1,065		572		1,714		35,387		6,607		9,297		6,919	
	W	3,452	23.1	652	11.9	136	13.0	167	15.7	41	7.2	496	28.9	10,084	28.5	866	13.1	2,401	25.8	2,759	39.9
1979-80	T	15,046		5,321		1,085		1,011		580		1,852		35,855		7,012		9,176		7,122	
	W	3,523	23.4	719	13.5	170	15.7	159	15.7	73	12.6	615	33.2	10,828	30.2	1,009	14.4	2,548	27.8	2,919	41.0
1980-81	T	15,505		5,460		1,097		1,145		597		1,922		36,331		6,898		9,455		6,640	
	W	3,833	24.7	788	14.4	207	18.9	188	16.4	69	11.6	677	35.2	11,768	32.1	962	13.9	2,645	28.1	2,910	43.8
1981-82	T	15,985		5,550		1,113		1,017		599		1,886		35,543						6,448	
	W	3,991	25.0	825	14.9	224	20.0	186	18.3	63	10.5	668	35.4	11,607	32.7					3,031	47.0
1982-83	T																				
	W																				

SOURCE: "Degrees Awarded to Women," National Center for Education Statistics; and Earned Degrees 1979 and 1980, NCES, unpublished.

TABLE 3-4

PROPORTION OF FIRST PROFESSIONAL DEGREES AWARDED TO WOMEN BY FIELD, 1972-73 - 1980-81

	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81
Chiropractic	* %	* %	* %	* %	9.3%	8.5%	10.0%	10.6%	12.1%	16.6%
Dentistry	1.?	1.4	2.0	3.1	4.5	7.4	11.2	11.8	13.5	14.4
Law, General	7.2	8.1	11.5	15.1	19.2	22.5	26.0	28.5	30.2	32.1
Medicine	9.0	9.0	11.2	13.2	16.2	19.2	21.5	23.1	23.4	24.7
Optometry	2.2	2.6	4.2	5.0	7.7	11.0	13.1	13.0	15.7	18.9
Osteopathic Medicine	3.5	2.9	2.8	5.3	7.2	8.8	12.5	15.7	15.7	16.4
Pharmacy	*	*	*	*	29.6	27.5	30.2	36.0	37.5	43.8
Podiatry or Podiatric Medicine	0.3	0.3	1.1	1.1	2.6	3.3	4.8	7.2	12.6	11.6
Theological Professions, General	1.9	3.4	5.5	6.8	7.6	9.5	11.3	13.1	14.4	13.9
Veterinary Medicine	9.4	10.2	11.2	15.9	18.1	22.8	24.5	28.9	32.8	35.2
Other	20.8	11.8	26.1	11.0	10.0	47.8		13.1		
ALL FIELDS	6.3	7.1	9.9	12.5	15.6	18.7	21.5	23.6	24.9	26.6

* Data not available.

SOURCE: Data on Earned Degrees Conferred by Institutions of Higher Education by Race, Ethnicity, and Sex, Academic Year 1980-1981, U.S. Department of Education, Office for Civil Rights, Unpublished

TABLE 3-5

FIRST PROFESSIONAL DEGREES BY RACIAL/ETHNIC GROUP, SEX AND FIELD, 1980-1981

FIELD	TOTAL *			BLACK NON-HISPANIC			HISPANIC			ASIAN/PACIFIC ISLANDER			AM. INDIAN/ ALASKAN NATIVE			WHITE NON-HISPANIC			NONRESIDENT ALIEN		
	Total	Women	% W	Total	Women	% B	Total	Women	% H	Total	Women	% A/P	Total	Women	% A.I.	Total	Women	% Wh	Total	Women	% Al
All Fields	71,340	19,146	26.8	2,931	1,159	4.1	1,541	410	2.2	1,456	465	2.0	192	58	0.3	64,551	16,922	90.5	669	132	19.7
Dentistry	5,460	788	14.4	195	69	3.6	86	17	1.6	204	45	3.7	10	1	0.2	4,896	788	89.7	69	17	1.3
Medicine	15,505	3,833	24.7	769	324	5.0	395	90	2.5	446	117	2.9	51	12	0.3	13,723	3,263	88.5	121	27	0.8
Optometry	1,097	207	18.9	9	6	0.8	16	3	1.5	40	19	3.6	2	1	0.2	1,017	174	92.7	13	4	1.2
Osteopathic Med.	1,145	188	16.4	16	5	1.4	13	2	1.1	14	6	1.2	8	1	0.7	1,091	173	95.3	3	1	0.3
Pharmacy	664	283	42.6	20	12	3.0	19	8	2.9	115	52	17.3	3	1	0.5	471	195	70.9	36	15	5.4
Podiatry	597	69	11.6	20	7	3.4	12	2	2.0	8	2	1.3	1	1	0.2	552	57	92.5	4	0	0.7
Veterinary Med.	1,922	677	35.2	37	21	1.9	11	4	0.6	17	6	0.9	4	2	0.2	1,846	642	96.0	7	2	0.4
Chiropractic Med.	2,337	389	16.6	13	2	0.6	24	3	1.0	22	1	0.9	3	2	0.1	2,144	357	91.7	131	24	5.6
Law	36,331	11,768	32.4	1,576	671	4.3	899	278	2.5	530	208	1.5	101	33	0.3	33,109	10,545	91.1	116	33	0.3
Theology	6,282	1,944	30.9	276	42	4.4	66	3	1.1	60	9	1.0	9	4	0.1	5,702	877	90.8	169	9	2.7

* Includes degree recipients whose racial/ethnic group was not reported (598 men and 18 women)

SOURCE: Digest of Education Statistics, NCES: Review of Legal Education in the United States, 1978, 1980-81 and 1981-82, American Bar Association; Journal of the American Medical Association, Vol. 238, No. 26, December 26, 1977; Vol. 246, No. 25, December 25, 1981; Vol. 248, No. 24, December 24-31, 1982; Annual Report, Dental Education Series, 1975-78, 1980-81, American Dental Association; Personal Communication with American Association of Dental Schools, April 1983; Fall Enrollments Questionnaire 1974-77 and Annual Statistical Report, 1981, American Association of Colleges of Osteopathic Medicine; and Personal Communication from the Association of American Veterinary Medical Colleges; Minorities and Women in the Health Fields, Health Resources Administration, 1980

TABLE 3-6

ENROLLMENT FOR FIRST PROFESSIONAL DEGREES BY FIELD AND SEX, SELECTED YEARS 1960-1983

YEAR		MEDICINE		DENTISTRY		OPTOMETRY		OSTEOPATHY		PODIATRY		VET. MED.		LAW		THEOLOGY		ARCHITECTURE*	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1960-61	Total	30,288		13,580		1,101						3,832		43,695				15,908*	
	Women	1,745	5.8	88	0.6	40	3.6					137	3.6	1,651	3.8			780*	4.9
1966-67	Total	28,685		11,826		1,671		1,431		678		2,245		46,878		9,949		1,151	
	Women	2,099	7.3	180	1.5	37	2.2	32	2.2	9	1.3	183	8.1	2,032	4.3	294	3.0	85	7.4
1968-69	Total	35,733		15,542		2,241		1,878		1,108		4,488		64,220		12,369		1,424	
	Women	3,129	8.8	171	1.1	53	2.4	54	2.9	8	0.7	351	7.8	3,745	5.8	328	2.7	166	11.7
1971-72	Total	43,965		17,433		2,691		2,301		1,267		5,163		94,416		22,789		6,262	
	Women	4,730	10.8	355	2.0	86	3.2	79	3.4	15	1.2	593	11.5	9,075	9.6	890	3.9	1,126	18.0
1973-74	Total	49,511		19,215		3,360		2,799		1,633		5,528		103,641		21,030		8,577	
	Women	7,701	15.6	892	4.6	227	6.8	180	6.5	40	2.4	957	17.3	16,730	16.1	1,543	7.3	1,886	22.0
1975-76	Total	55,622		20,517		3,811		3,438		2,105		5,694		113,205		23,960		10,231	
	Women	11,386	20.5	1,987	9.7	415	10.9	364	10.6	108	5.1	1,337	23.5	26,403	23.3	2,412	10.1	2,555	25.0
1976-77	Total	58,266		21,013		4,033		3,671		2,204		6,571		117,451				7,884	
	Women	13,059	22.4	2,349	11.1	542	13.4	472	12.9	157	7.1	1,805	27.5	29,538	29.2			2,198	27.9
1977-78	Total	60,039		21,510		4,440		3,926		2,388		6,903		118,557				10,789	
	Women	14,218	23.7	2,796	13.0	699	15.7	570	14.8	259	10.8	2,129	30.8	32,538	27.5			3,385	31.4
1978-79	Total	62,213		22,179		4,436		4,254		2,498		7,312		119,120				9,273	
	Women	15,102	24.3	3,112	14.0	757	17.1	688	16.2	268	10.7	2,471	33.8	36,251	30.4			2,397	25.8
1979-80	Total	63,800		22,482		4,500		4,479		2,531		7,007		122,801				7,778	
	Women	16,141	25.3	3,482	15.5	868	19.3	775	17.3	305	12.1	2,570	36.7	38,627	31.5			2,649	34.1
1980-81	Total	65,497		22,842		4,540		4,940		2,577		8,154		125,397				9,479	
	Women	17,204	26.3	3,879	17.0	985	21.7	971	19.7	306	11.9	3,220	39.4	42,122	33.6			3,220	34.0
1981-82	Total	66,485		22,621		4,541		5,304		2,608		8,499		127,312					
	Women	18,555	25.0	4,227	18.7	1,077	23.7	1,108	20.9	428	16.4	3,576	42.0	44,902	35.3				
1982-83	Total											8,682							
	Women											4,028	46.4						

*Includes Environmental Design after 1966.

SOURCE: National Center for Education Statistics, 1980 unpublished data. Journal of American Medical Association, Vol. 248, No. 24, Dec. 24/31, 1982. Copyright AMA; Personal communication, American Association of Dental Schools, 1983; Personal Communication, Association of American Veterinary Colleges, 1983; 1981-82 Review of Legal Education. Copyright A[illegible]

TABLE 3-7

ENROLLMENTS FOR FIRST PROFESSIONAL DEGREES, BY SEX AND ETHNICITY, 1980, 1981-82 AND 1982-83

	TOTAL		WHITE*		BLACK		ASIAN		AMERICAN INDIAN		HISPANIC		NON-RESIDENT ALIEN	
	Total	Women	Total	Women	Total	Women	Total	Women	Total	Women	Total	Women	Total	Women
1980														
Medicine	74,313	19,122	63,810	15,619	3,983	1,717	2,636	769	240	71	3,069	832	555	114
Percent of Total	100.0	25.7	85.9	21.0	5.4	2.3	3.6	1.0	0.3	0.1	4.1	1.1	0.9	0.2
Percent of Women		25.7		24.5		43.1		30.2		29.6		27.1		20.5
Dentistry	26,813	3,936	19,642	3,017	1,001	382	971	231	144	17	770	220	285	69
Percent of Total	100.0	14.7	73.3	11.3	3.7	1.4	3.6	0.9	0.5	0.1	2.9	0.8	1.1	0.3
Percent of Women		14.7		15.4		38.2		23.8		11.8		28.6		24.2
Veterinary Medicine	8,013	3,141	7,658	4,682	168	92	73	40	18	8	84	24	21	10
Percent of Total	100.0	39.2	95.6	58.4	2.1	1.2	0.9	0.5	0.2	0.1	1.1	0.3	0.3	0.1
Percent of Women		39.2		61.1		54.8		45.0		44.4		28.6		47.6
Law	101,675	34,638	90,940	30,250	4,784	2,255	1,451	597	610	228	3,219	1,142	671	166
Percent of Total	100.0	34.1	89.4	29.8	4.7	2.2	1.4	0.6	0.6	0.2	3.2	1.1	0.7	0.2
Percent of Women		34.1		33.3		47.1		41.1		37.4		35.5		24.7
1981-82														
Medicine	66,485	18,555	57,182		3,791		2,281		234		2,195			
Percent of Total	100.0	27.9	86.0		5.8		3.5		0.4		3.3			
Dentistry	22,621	4,227	19,782		999		1,196		61		583			
Percent of Total	100.0	18.7	87.4		4.4		5.3		0.3		2.6			
Veterinary Medicine**	8,682	4,028												
Percent of Total	100.0	46.4												
Law	102,227	36,588	91,097		5,789		1,755		402		3,184			
Percent of Total	100.0	35.8	89.1		5.7		1.7		0.4		3.1			

* Non-Hispanic

** 1982-83

FIELD: Architecture and Environmental Design

SOURCE: Earned Degrees Conferred Series, 1970-71 through 1980-81, U.S. Department of Education (NCES)

TABLE 3-8

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1970-71 TO 1980-81

	BACHELOR'S			MASTER'S			DOCTORATES		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1970-71	5,578	667	12.0	1,724	243	14.1	36	3	8.3
1971-72	6,452	775	12.0	1,928	281	14.6	50	7	14.0
1972-73	6,980	923	13.2	2,319	364	15.7	58	4	6.9
1973-74	7,840	1,164	14.8	2,733	502	18.4	69	4	5.8
1974-75	8,238	1,435	17.4	2,953	599	20.3	69	11	15.9
1975-76	9,169	1,757	19.2	3,215	670	20.8	82	13	15.8
1976-77	9,222	1,973	21.4	3,213	724	22.5	73	11	15.1
1977-78	9,266	2,199	23.7	3,121	812	26.0	73	16	21.9
1978-79	9,297	2,401	25.8	3,124	889	28.5	96	22	22.9
1979-80	9,176	2,548	27.8	3,157	900	28.5	79	13	16.5
1980-81	9,455	2,655	28.1	3,153	919	29.1	93	20	21.5
TOTAL	90,673	18,497	20.4	30,640	6,903	22.5	778	124	15.9

SOURCE: Personal Communication with American Institute of Architects, May 1983

TABLE 3-9

AIA MEMBERSHIP BY RACE AND SEX 1983

Estimated registered architects in U.S.		60,000
Members of AIA		41,467
Women		1,931
Minorities		1,514
Indian/Eskimo/Aleut	35	
Asian/Pacific Islander	746	
Hispanic	374	
Black	239	
Other	120	
Architecture firms in AIA		11,158
Owned by women		427
Owned by minorities		1,022

FIELD: Accounting

SOURCE: Minority Recruitment and Equal Opportunity Committee 1981 and 1982 Report, by Sharon L. Donahue, American Institute of Certified Public Accountants

TABLE 3-10

NUMBER AND PERCENT OF PROFESSIONALS EMPLOYED IN MAJOR ACCOUNTING FIRMS BY MINORITY GROUP AND SEX, 1976 - 1982

	1976		1977		1978		1979		1980		1981		1982	
MINORITY GROUP	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
American Indians	26	0.05	33	0.06	34	0.06	45	0.07	49	0.07	51	0.07	51	0.07
Asians	641	1.14	659	1.22	831	1.40	933	1.46	1,061	1.58	1,349	1.85	1,454	1.90
Blacks	955	1.70	1,032	1.91	1,042	1.76	1,130	1.77	1,204	1.80	1,193	1.63	1,185	1.55
Hispanics	541[1]	0.96	537	0.99	620	1.04	646	1.01	662	1.00	788	1.08	905	1.18
Total Minority	2,163	3.84	2,261	4.18	2,527	4.26	2,754	4.30	2,976	4.44	3,381	4.63	3,595	4.69
Total Women	5,783	10.27	7,209	13.32	8,514	14.34	11,070	17.30	13,294	19.84	15,984	21.88	18,509	24.14
Total Professionals	56,336	100.00	54,122	100.00	59,352	100.00	64,020	100.00	67,005	100.00	73,046	100.00	76,670	100.00

TABLE 3-11

PLACEMENT OF ACCOUNTING GRADUATES FROM THE HISTORICALLY BLACK AND MINORITY COLLEGES AND UNIVERSITIES, 1973 - 1981

	1973		1974		1975		1976		1977		1978		1979		1980		1981	
PLACEMENT	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Public Accounting	126	15.1	142	15.0	170	16.4	204	16.4	147	13.6	173	11.4	201	11.3	180	10.2	208	13.4
Industry	244	29.1	271	28.6	306	29.6	401	32.3	396	37.3	562	36.9	543	30.6	544	30.9	488	31.4
Government	136	16.3	160	16.9	158	15.3	172	13.9	163	15.4	199	13.1	297	16.7	252	14.3	217	14.0
Nonprofit Org.	19	2.3	22	2.3	26	2.5	21	1.7	32	3.0	38	2.5	60	3.4	64	3.6	38	2.4
Graduate Schools	51	6.1	65	6.9	94	9.1	112	9.0	111	10.5	131	8.6	139	7.8	118	6.7	120	7.7
Other	38	4.5	28	3.0	34	3.3	34	2.7	31	2.9	78	5.1	39	2.2	58	3.3	66	4.2
Unknown	223	26.6	259	27.3	246	23.8	298	24.0	181	17.1	341	22.4	496	27.9	545	30.9	418	26.9
Total Graduates	837	100.0	947	100.0	1,034	100.0	1,242	100.0	1,061	100.0	1,522	100.0	1,775	100.0	1,761	100.0	1,555	100.0
Total Majors	4,003		5,121		5,936		6,840		7,303		10,450		11,914		10,851		10,380	

TABLE 3-12

NUMBER OF CPA'S EMPLOYED IN MAJOR ACCOUNTING FIRMS BY MINORITY GROUP AND SEX, 1976 - 1982

MINORITY GROUP	1976	1977	1978	1979	1980	1981	1982
American Indian	14	14	15	22	26	23	26
Asians	171	195	235	316	375	445	475
Blacks	114	129	139	172	194	212	240
Hispanics	149	162	201	240	240	278	305
Total Minority	448	500	590	750	835	958	1,046
Total Women	1,080	1,532	1,944	2,631	3,493	4,665	5,510

FIELD: Business and Management

SOURCE: AACSB Newsline, Vol. 13, No. 3, February 1983, American Assembly of Collegiate Schools of Business

TABLE 3-13

BUSINESS FACULTY MEMBERS AT AACSB MEMBER SCHOOLS BY SEX AND ETHNICITY, 1982

	Percent
Male	85.8
Female	14.2
White	77.1
Black	3.9
Hispanic	1.5
Asian	9.2
American Indian	0.3
Foreign	8.0
Female new hires	22.0

FIELD: Business and Management

SOURCE: Earned Degrees Conferred Series, 1970-71 Through 1980-81 U.S. Office of Education (NCES)

TABLE 3-14

DEGREES AWARDED, BY SEX AND LEVEL OF DEGREE, 1970-71 TO 1980-81

	BACHELOR'S			MASTER'S			DOCTORATES		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1970-71	116,709	10,803	9.3	26,654	1,045	3.9	810	23	2.8
1971-72	123,306	11,966	9.7	30,511	1,207	4.0	902	20	2.2
1972-73	128,244	13,840	10.8	31,239	1,533	4.9	932	53	5.7
1973-74	133,905	17,481	13.1	32,820	2,161	6.6	983	50	5.1
1974-75	135,455	22,223	16.4	36,450	3,080	8.4	1,011	41	4.0
1975-76	145,035	28,783	19.8	42,728	4,974	11.6	956	52	5.4
1976-77	152,088	35,583	23.4	46,545	6,664	14.3	869	55	6.3
1977-78	163,274	44,604	27.3	48,661	8,216	16.9	867	72	8.3
1978-79	175,420	53,875	30.7	50,646	9,698	19.1	863	101	11.7
1979-80	189,224	63,883	33.8	55,322	12,355	22.3	796	115	14.4
1980-81	200,876	73,806	36.7	58,018	14,513	25.0	845	125	14.8
TOTAL	1,663,536	376,847	22.7	459,594	65,446	14.2	9,834	707	7.2

FIELD: Law

SOURCE: Earned Degrees Conferred Series, 1970-71 Through 1980-81, U.S. Office of Education (NCES)

TABLE 3-15

DEGREES AWARDED, BY SEX AND LEVEL OF DEGREE, 1970-71 TO 1980-81

	BACHELOR'S			MASTER'S			DOCTORATES		
	Total Sexes Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1970-71	545	27	5.0	955	46	4.8	20	0	-
1971-72	503	33	6.6	932	54	5.8	40	1	2.5
1972-73	474	40	8.4	1,071	80	7.5	37	1	2.7
1973-74	494	52	10.5	1,181	84	7.1	27	1	3.7
1974-75	436	62	14.2	1,245	100	8.0	21	0	-
1975-76	531	100	18.8	1,442	173	11.9	76	3	3.9
1976-77	559	154	27.5	1,574	208	13.2	60	8	13.3
1977-78	653	187	28.6	1,786	261	14.6	39	5	12.8
1978-79	678	274	40.4	1,647	255	15.5	46	7	15.2
1979-80	683	311	45.5	1,817	286	15.7	40	4	10.0
1980-81	776	388	50.0	1,832	326	17.8	60	4	6.7
TOTAL	6,332	1,628	25.7	15,482	1,873	12.1	466	34	7.3

TABLE 3-16

FULL-TIME FACULTY IN ABA-APPROVED LAW SCHOOLS, 1980

	Total	Men	Women	% of Total	% of Women
TOTAL	**5,226**	**4,514**	**707**	**100.0**	**13.5**
Minority	293	241	52	5.6	17.7
American Indian	13	13	0	0.05	0.0
Asian American	32	30	2	0.6	6.2
Black	171	131	40	3.3	23.4
Mexican American	14	11	3	0.3	21.4
Puerto Rican	38	33	5	0.7	13.1
Other Hispanic	25	23	2	0.5	8.0
Non-Minority	4,933	4,273	655	94.4	13.3

SOURCE: A Review of Legal Education in the United States - Fall 1977-78 through 1981-82, American Bar Association Section of Legal Education and Admission to the Bar, copyright by the American Bar Association.

TABLE 3-17

NUMBER OF TEACHERS IN ABA APPROVED LAW SCHOOLS BY SEX, 1977-78 AND 1980-81

	1977 - 78			1980 - 81		
	TOTAL	WOMEN	% WOMEN	TOTAL	WOMEN	% WOMEN
Full-Time	3,875	411	10.61	4,225	517	12.24
Part-Time	2,156	230	10.67	2,255	205	9.09
Dean & Administrators Who Teach	344	32	9.30	465	96	20.65
TOTAL	6,375	673	10.56	6,945	818	11.78

TABLE 3-18

FIRST YEAR AND TOTAL ENROLLMENTS IN ABA APPROVED LAW SCHOOLS BY SEX AND ETHNICITY, 1969-70 - 1981-82

YEAR	TOTAL	WOMEN		BLACK		HISPANIC		ASIAN/PACIFIC ISLANDER		AMERICAN INDIAN/ ALASKAN NATIVE	
	No.	No.	%	No.	%	No.	%	No.	%	No.	%
1969-70	29,128	*		1,115	3.83	309	1.06	*		44	0.15
	68,386	4,715	6.89	2,128	3.11	548	0.80			72	0.11
1970-71	34,713	*		*		*		*		*	
	82,499	7,031	8.52								
1971-72	36,171	*		1,716	4.74	526	1.45	254	0.70	71	0.20
	93,118	8,914	9.57	3,744	4.02	1,156	1.24	480	0.52	140	0.15
1972-73	35,131	*		1,907	5.43	649	1.85	298	0.85	79	0.22
	101,664	12,173	11.97	4,423	4.35	1,446	1.42	681	0.67	173	0.17
1973-74	37,018	*		1,943	5.25	729	1.97	327	0.88	109	0.29
	106,102	16,760	15.80	4,817	4.54	1,700	1.60	850	0.80	222	0.21
1974-75	38,074	*		1,910	5.02	858	2.25	429	1.13	110	0.29
	110,713	21,788	19.68	4,995	4.51	2,007	1.81	1,063	0.96	265	0.24
1975-76	39,038	*		2,045	5.24	814	2.09	436	1.12	118	0.30
	116,991	26,737	22.85	5,127	4.38	2,173	1.86	1,099	0.94	295	0.25
1976-77	39,996	*		2,128	5.32	886	2.22	484	1.21	133	0.33
	117,451	29,538	29.15	5,503	4.69	2,375	2.02	1,324	1.13	301	0.26
1977-78	39,676	11,928	30.06	1,945.5	4.90	979	2.47	509.5	1.28	137	0.35
	118,557	32,538	27.45	5,304.5	4.48	2,547	2.15	1,382.5	1.67	363	0.31
1978-79	40,479	*		2,021	5.00	1,075	2.66	557	1.38	145	0.36
	121,606	36,808	30.27	5,350	4.40	2,758	2.67	1,424	1.17	390	0.32
1979-80	40,717	*		2,002	4.92	1,072	2.63	577	1.42	171	0.42
	122,860	38,627	31.43	5,257	4.28	2,812	2.89	1,547	1.26	392	0.32
1980-81	42,296	*		2,144	5.07	1,164	2.75	641	1.52	163	0.39
	125,397	42,122	33.59	5,506	4.39	3,012	2.40	1,641	1.31	415	0.33
1981-82	42,521	15,811	37.18	2,238	5.26	1,263	2.97	650	1.52	160	0.38
	127,312	44,902	55.26	5,789	4.54	3,185	2.50	1,755	1.38	401	0.32

*Figures not available

FIELD: Legal and Kindred

SOURCE: Federal Civilian Workforce Statistics, Equal Employment Opportunity Statistics, U.S. Office of Personnel Management, AR-80-71, Nov. 1980

TABLE 3-19

NUMBER AND PERCENT OF FEDERAL WORKERS EMPLOYED IN LEGAL AND KINDRED OCCUPATIONS BY OCCUPATIONAL TITLE, SEX AND MINORITY STATUS, NOVEMBER 1980

OCCUPATIONAL TITLE	ALL EMPLOYEES			TOTAL MINORITY				BLACK		HISPANIC		AM. INDIAN		ASIAN		ALL OTHERS	
	Total	Women	% W	Total	%	Women	% W	No.	% B	No.	% H	No.	% I	No.	% A	No.	% O
Law Clerk	780	379	48.6	157	20.1	74	9.5	105	13.5	37	4.7	2	0.3	13	1.7	623	79.9
General Attorney	16,909	3,754	22.2	1,668	9.9	549	3.2	1,180	7.0	328	1.9	24	0.1	136	0.8	3,205	19.0
Estate Tax Examiner	24	1	4.2	2	8.3	1	4.2	2	8.3	0	0.0	0	0.0	0	0.0	22	91.7
Hearings & Appeals	958	155	16.2	110	11.5	39	4.1	75	7.8	16	1.7	2	0.2	17	1.8	848	88.5
Administrative Law Judge	1,148	51	4.4	57	5.0	8	0.7	23	2.0	26	2.3	5	0.4	3	0.3	1,091	95.0
Deportation & Exclusion Exam.	38	2	5.3	3	7.9	0	0.0	3	7.9	0	0.0	0	0.0	0	0.0	35	92.1
Clerk of Court	22	15	68.2	4	18.2	3	13.6	4	18.2	0	0.0	0	0.0	0	0.0	18	81.8
Paralegal Specialist	2,086	1,211	58.1	474	22.7	352	16.9	378	18.1	59	2.8	15	0.7	22	1.1	1,612	77.3
Contact Representative	10,411	7,296	70.1	2,886	27.7	2,164	20.8	1,941	18.6	767	7.4	68	0.7	110	1.1	7,525	72.3
Legal Assistant	18	13	72.2	1	5.6	0	0.0	1	5.6	0	0.0	0	0.0	0	0.0	17	94.4
Legal Inst. Exam. Technician	892	690	77.4	253	28.4	210	23.5	196	22.0	25	2.8	24	2.7	8	0.9	639	71.6
Legal Inst. Exam. Clerk	1,730	1,506	87.1	683	39.5	596	34.5	540	31.2	78	4.5	36	2.1	29	1.7	1,047	60.5
Land Law Examiner	225	166	73.8	47	20.9	39	17.3	9	4.0	28	12.4	8	3.6	2	0.9	178	79.1
Passport and Visa Examiner	448	198	44.2	66	14.7	36	8.0	16	3.6	0	0.0	0	0.0	5	1.1	382	85.3
Legal Clerk & Tech. (Tech.)	1,774	1,604	90.4	451	25.4	397	22.4	352	19.8	67	3.8	12	0.7	20	1.1	1,323	74.6
Legal Clerk and Tech. (Cler.)	3,348	3,157	94.3	1,012	30.2	925	27.6	771	23.0	173	5.2	30	0.9	38	1.1	2,336	69.8
Tax Law Specialist	709	128	18.1	46	6.5	25	3.5	41	5.8	1	0.1	0	0.0	4	0.6	663	93.5
General Claims Examiner	772	555	71.9	301	39.0	238	30.8	270	35.0	17	2.2	7	0.9	7	0.9	471	61.0
Workers Compensation Claims	715	317	44.3	143	20.0	88	12.3	117	16.4	13	1.8	2	0.3	11	1.5	572	80.0
Loss & Damage Claims	139	103	74.1	22	5.8	16	11.5	16	11.5	4	2.9	0	0.0	2	1.4	117	84.2
Social Ins. Claims Examiner	10,248	6,343	61.9	3,319	32.4	2,763	27.0	3,051	29.8	132	1.3	10	0.1	126	1.2	6,929	67.6
Unempl. Comp. Claims Exam.	110	85	77.3	51	46.4	46	41.8	51	46.4	0	0.0	0	0.0	0	0.0	59	53.6
Dependent & Estates Claims	65	45	69.2	21	32.3	11	16.9	15	23.1	4	6.2	0	0.0	2	3.1	44	67.7
Veterans Claims Examiner	2,879	874	30.4	459	15.9	260	9.0	342	11.9	81	2.8	9	0.3	27	0.9	2,420	84.1
Civil Service Retirement	273	144	52.7	110	40.3	79	28.9	107	39.2	1	0.4	0	0.0	2	0.7	163	59.7
Claims Clerical	14,304	12,786	89.4	4,964	34.7	4,964	34.7	3,758	26.3	886	6.2	117	0.8	203	1.4	9,340	65.3

THE WORK FORCE

CHAPTER 4

GENERAL WORK FORCE

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CHAPTER 5

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SOURCE: 1980 Census of Population, Supplementary Report, May 1981, U.S. Department of Commerce

TABLE 4-1

POPULATION OF THE UNITED STATES BY AGE, SEX, RACE AND SPANISH ORIGIN, 1980

AGE	Total No.	% Female	PERCENT BY RACE AND SEX											
			White		Black		Native Am.		Asian		Other Race		Hispanic*	
			% W	% F	% B	% F	% N.A.	% F	% A	% F	% O	% F	% H	% F
All Ages	226,504,825	51.4	83.2	51.3	11.7	52.8	0.6	50.6	1.6	51.6	3.0	54.4	6.5	50.2
Under 5	16,344,407	48.9	77.3	48.7	14.9	49.6	0.9	49.2	1.8	49.5	5.1	48.9	10.2	49.0
5 - 9	16,697,134	48.9	78.0	48.7	14.9	49.6	0.9	49.5	1.8	49.1	4.4	49.0	9.2	47.8
10 - 14	18,240,919	48.9	79.3	48.8	14.7	49.7	0.9	49.0	1.5	48.7	3.7	49.3	8.1	49.4
15 - 19	21,161,667	49.2	80.1	49.1	14.1	50.1	0.8	49.4	1.1	48.3	3.6	48.0	7.1	51.8
20 - 24	21,312,557	50.0	81.1	49.8	12.8	52.3	0.7	49.8	1.5	50.9	3.9	46.4	7.4	48.3
25 - 29	19,517,672	50.3	81.9	49.9	11.9	53.3	0.6	50.8	1.9	53.9	3.7	46.8	7.1	49.3
30 - 34	17,557,957	50.6	83.4	50.2	10.8	53.9	0.6	51.1	2.1	54.4	3.1	48.2	6.4	50.5
35 - 39	13,963,008	50.9	84.2	50.4	10.4	54.6	0.6	51.2	2.0	52.5	2.8	49.3	6.1	51.3
40 - 44	11,668,239	51.1	84.2	50.7	10.7	50.7	0.6	51.3	1.9	51.1	2.6	50.0	6.1	51.6
45 - 49	11,088,383	51.4	85.3	51.0	10.3	54.9	0.5	51.9	1.6	54.3	2.3	50.7	5.6	51.7
50 - 54	11,708,984	52.0	86.7	51.6	9.6	55.3	0.4	51.6	1.4	55.8	1.8	51.8	4.8	52.1
55 - 59	11,614,054	52.8	88.1	52.6	8.9	55.0	0.4	52.1	1.1	53.0	1.4	51.4	3.9	52.2
60 - 64	10,085,711	53.7	89.0	53.5	8.6	55.8	0.3	52.9	1.0	53.9	1.0	53.7	3.2	54.1
65 - 69	8,780,844	55 6	89.0	55.4	8.8	57.3	0.3	54.8	0.9	50.9	1.0	55.9	3.0	56.2
70 - 74	6,796,762	58.0	89.7	58.1	8.3	58.4	0.3	55.7	0.9	46.6	0.9	55.7	2.9	56.1
75 - 79	4,792,597	59.4	89.9	61.7	8.1	60.6	0.3	55.7	0.8	49.8	0.9	56.4	2.9	56.8
80 - 84	2,934,229	65.3	91.5	65.6	6.8	62.5	0.2	59.4	0.7	57.3	0.7	57.8	1.9	58.8
85 & Over	2,239,721	69.6	91.3	70.0	7.1	66.7	0.3	60.8	0.6	62.4	0.7	59.6	2.2	62.0
Median Age	30.0	31.3	31.3	32.6	24.9	26.2	23.0	23.5	28.6	29 3	22.3	22.4	23.2	23.3

* Persons of Hispanic Origin may be of any race.

SOURCE: 1980 Fact Book for Academic Administrators, American Council on Education

TABLE 4-2

18-YEAR OLDS BY SEX AND RACE, SELECTED YEARS, 1950-2000

	Population, Age 18[a] (in thousands)								
	All Races			Black & Other Races			Black		
Year	Total	Men	Women	Total	Men	Women	Total	Men	Women
1950	2,162	1,090	1,074	271	133	138	b	b	b
1960	2,614	1,325	1,289	312	155	157	284	143	141
1970	3,985	1,943	1,867	512	253	259	464	228	236
1975	4,243	2,146	2,097	639	314	325	559	276	281
1976	4,251	2,150	2,101	632	316	316	559	279	281
1977	4,251	2,152	2,099	639	324	325	573	285	288
1978	4,221	2,136	2,085	651	325	326	573	285	288
	Series II Projections[c]								
1979	4,184	2,121	2,121	666	333	333	582	290	292
1980	4,243	2,130	2,071	666	334	332	581	290	291
1981	4,156	2,078	2,078	672	335	337	580	290	290
1982	4,087	2,050	2,037	666	336	332	579	290	289
1983	3,987	1,999	1,988	651	331	329	569	284	285
1984	3,785	1,874	1,879	654	323	321	548	274	274
1985	3,693	1,822	1,782	621	311	310	525	262	263
1986	3,671	1,793	1,736	616	308	307	519	259	259
1987	3,567	1,765	1,702	631	316	315	530	265	265
1988	3,653	1,850	1,804	646	324	322	539	270	269
1989	3,733	1,895	1,838	633	344	336	566	285	281
1990	3,426	1,736	1,690	654	329	324	533	268	265
1991	3,240	1,643	1,598	635	321	315	514	258	255
1992	3,168	1,609	1,559	621	314	307	496	250	246
1993	3,242	1,643	1,599	633	320	313	506	255	252
1994	3,199	1,626	1,573	620	314	306	495	250	246
1995	3,262	1,657	1,604	623	315	308	489	247	242
1996	3,359	1,707	1,652	639	323	315	499	252	247
1997	3,391	1,774	1,717	660	334	326	517	261	256
1998	3,652	1,856	1,796	681	345	336	533	269	264
1999	3,809	1,934	1,874	701	355	346	548	277	271
2000	3,911	1,987	1,923	717	363	354	560	283	277

a Total populations, including armed forces overseas as of July 1.

b Source does not estimate population for "Negro" or "Black," only for "Nonwhite."

c Series II projections use a fertility assumption of 2.1 lifetime births per woman. It should be remembered that this affects only the last years of the century for the age cohort.

TABLE 4-3

TOTAL LABOR FORCE BY AGE GROUP, SEX, AND RACE, SELECTED YEARS, 1960-1990

Age Group, Sex, and Race	Annual Average Labor Force[a] (in thousands)					
	1960	1970	1975	1977	1985[b]	1990[b]
	All Races					
Total U.S.	72,134	85,903	94,768	99,534	115,043	121,476
16-24	12,700	19,915	23,483	24,843	25,554	23,536
25-54	46,596	51,457	57,142	60,369	75,190	84,502
55 and over	12,728	14,100	14,268	14,322	14,299	13,428
Men, total	48,933	54,333	57,712	59,467	66,951	67,059
16-24	8,131	11,773	13,313	13,939	13,814	12,205
25-54	31,562	33,293	35,597	36,639	42,718	45,733
55 and over	8,970	9,291	8,892	8,893	8,719	8,115
Women, total	23,171	31,560	37,056	40,069	50,092	54,397
16-24	4,619	8,143	10,175	10,905	12,040	11,331
25-54	15,034	18,164	21,545	23,730	32,472	37,768
55 and over	3,918	5,209	5,376	5,432	5,580	5,313
	Black and Other					
Total	7,851	9,525	10,601	11,676	14,410	15,976
16-24	1,481	2,361	2,908	2,989	3,255	3,172
25-54	5,203	5,815	6,402	7,346	9,710	11,203
55 and over	1,150	1,320	1,381	1,340	1,475	1,516
Men, total	4,614	5,567	6,358	6,309	7,589	8,263
16-24	930	1,378	1,682	1,697	1,738	1,604
25-54	3,149	3,322	3,853	3,949	5,012	5,743
55 and over	735	797	823	772	839	916
Women, total	3,080	4,019	4,333	5,298	6,851	7,713
16-24	551	983	1,226	1,322	1,517	1,568
25-54	2,114	2,513	2,549	3,397	4,698	5,545
55 and over	415	523	556	568	639	600

a Total labor force. This figure is about 2 million greater than the civilian labor force. The difference is found principally among men in the 16-44 age groups.

b Intermediate growth level projections.

SOURCE: Digest of Education Statistics 1982, National Center for Education Statistics, NCES 82-407

TABLE 4-4

OCCUPATION OF EMPLOYED PERSONS 16 YEARS OLD AND OVER, BY SEX, RACE, AND YEARS OF SCHOOL COMPLETED: UNITED STATES, MARCH 1981

Sex, race, and occupation	Total employed (in thousands)	Percentage distribution, by years of school completed							Median school years completed
		Total	Elementary school		High school		College		
			Less than 8[1]	8	1 to 3	4	1 to 3	4 or more	
1	2	3	4	5	6	7	8	9	10
Men									
White									
All occupational groups	**50,373**	**100.0**	**4.1**	**4.5**	**13.6**	**37.4**	**18.0**	**22.5**	**12.7**
Professional, technical, and kindred workers	8,340	100.0	0.2	0.4	1.4	13.0	17.1	67.9	16.6
Managers and administrators, except farm	8,054	100.0	1.3	2.4	5.8	31.6	22.7	36.2	14.1
Sales workers	3,285	100.0	0.9	1.0	8.6	32.1	26.5	31.0	13.8
Clerical and kindred workers	3,043	100.0	1.4	2.1	12.2	41.3	27.0	16.1	12.6
Craft and kindred workers	10,725	100.0	4.5	5.6	16.2	52.5	16.3	4.8	12.4
Operatives, except transport	5,346	100.0	8.8	8.0	21.6	49.2	11.2	2.3	12.2
Transport equipment operatives	2,553	100.0	6.0	7.3	23.8	48.7	11.9	2.3	12.3
Laborers, except farm	3,016	100.0	8.6	7.3	26.7	40.9	13.8	2.7	12.2
Service workers, including private household	4,158	100.0	6.2	6.3	23.1	36.7	21.1	7.7	12.4
Farm workers	1,855	100.0	13.4	12.6	17.9	38.6	9.5	8.0	12.2
Black									
All occupational groups	**4,561**	**100.0**	**9.9**	**4.6**	**21.9**	**37.6**	**10.7**	**9.3**	**12.4**
Professional, technical, and kindred workers	399	100.0	1.6	0.4	3.3	20.2	27.9	46.7	15.6
Managers and administrators, except farm	209	100.0	4.3	2.5	7.5	29.1	21.6	34.9	13.8
Sales and clerical workers	480	100.0	1.4	1.5	10.2	41.6	33.1	12.2	12.9
Craft and kindred workers	811	100.0	8.7	4.5	22.9	44.4	15.0	4.5	12.3
Operatives, except transport	717	100.0	9.5	6.8	24.4	44.7	12.2	2.5	12.2
Transport equipment operatives	457	100.0	10.4	7.4	28.8	40.3	11.9	1.2	12.1
Laborers, except farm	533	100.0	21.6	5.6	29.4	34.2	8.0	1.2	11.4
Service workers, including private household	845	100.0	8.9	5.1	30.7	37.2	16.0	2.1	12.1
Farm workers	110	100.0	52.0	6.0	23.6	18.4	- - -	- - -	7.7
Hispanic Origin									
All occupational groups	**3,047**	**100.0**	**24.3**	**7.9**	**19.4**	**26.9**	**12.7**	**8.8**	**11.8**
Professional, technical, and kindred workers	258	100.0	2.9	1.0	4.2	15.5	19.5	56.9	16.2
Managers and administrators, except farm	250	100.0	8.3	7.5	9.5	32.9	20.4	21.4	12.8
Sales and clerical workers	270	100.0	4.5	3.3	19.3	37.2	29.0	6.7	12.6
Craft and kindred workers	576	100.0	21.6	7.9	22.0	32.9	12.0	3.8	11.8
Operatives, except transport	596	100.0	35.6	9.7	22.0	24.0	7.3	1.5	9.7
Transport equipment operatives	204	100.0	24.7	6.7	23.2	31.8	12.4	1.2	11.4
Laborers, except farm	333	100.0	30.4	12.5	27.8	22.4	5.5	1.5	10.1
Service workers, including private household	413	100.0	27.7	9.5	21.6	26.5	12.3	2.4	10.8
Farm workers	148	100.0	65.2	7.9	12.7	10.8	1.4	2.0	6.3
Women									
White									
All occupational groups	**37,570**	**100.0**	**2.2**	**2.8**	**12.6**	**46.4**	**10.2**	**16.8**	**12.7**
Professional, technical, and kindred workers	6,531	100.0	0.1	0.4	1.8	15.6	22.1	59.9	16.3
Managers and administrators, except farm	2,966	100.0	0.4	1.5	6.3	44.3	25.0	22.5	12.9
Sales workers	2,644	100.0	1.3	2.4	16.0	42.5	21.8	11.0	12.6
Clerical and kindred workers	13,325	100.0	0.3	0.9	8.1	60.7	22.6	7.4	12.7
Craft workers, operatives, and laborers, except farm	4,723	100.0	8.6	8.1	24.4	48.9	7.0	3.0	12.2
Private household workers	736	100.0	10.7	7.3	33.0	38.0	8.8	2.1	11.9
Service workers, except private household	6,094	100.0	3.8	5.3	23.4	47.8	16.0	3.7	12.4
Farm workers	351	100.0	5.2	12.1	18.4	43.3	11.1	9.7	12.3
Black									
All occupational groups	**4,507**	**100.0**	**6.8**	**3.1**	**19.2**	**41.2**	**10.8**	**12.9**	**12.5**
Professional, technical, and kindred workers	645	100.0	0.3	0.8	3.2	20.7	22.1	52.9	16.1
Managers and administrators, except farm	155	100.0	0.5	0.6	12.9	30.2	27.1	28.6	13.7
Sales workers	134	100.0	2.3	2.2	18.1	48.7	20.7	8.0	12.6
Clerical and kindred workers	1,379	100.0	0.2	0.8	9.6	49.1	31.5	8.9	12.8
Craft workers, operatives, and laborers, except farm	657	100.0	8.4	2.8	25.5	55.0	6.8	1.4	12.2
Private household workers	330	100.0	30.9	11.3	33.6	21.6	1.5	1.1	9.5
Service workers, except private household	1,194	100.0	11.8	5.3	28.2	41.5	12.5	0.8	12.1
Farm workers	11	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Hispanic Origin									
All occupational groups	**1,940**	**100.0**	**17.0**	**5.5**	**15.8**	**37.9**	**16.3**	**7.5**	**12.3**
Professional, technical, and kindred workers	185	100.0	0.2	0.8	3.4	20.7	32.0	42.9	15.4
Managers and administrators, except farm	86	100.0	3.7	1.9	7.2	40.3	28.8	20.0	12.9
Sales workers	99	100.0	7.2	4.2	21.6	40.7	21.6	4.3	12.4
Clerical and kindred workers	649	100.0	2.0	2.0	11.5	55.3	24.7	4.5	12.6
Craft workers, operatives, and laborers, except farm	485	100.0	35.9	8.7	22.7	26.3	4.7	1.7	9.7
Private household workers	66	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Service workers, except private household	353	100.0	25.5	9.3	23.9	35.3	7.4	1.7	11.2
Farm workers	16	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)

[1] Includes persons reporting no school years completed.

[2] Percent and median not shown where base is less than 75,000.

NOTE.—Because of rounding, details may not add to totals.

SOURCE: Monthly Labor Review, Bureau of Labor Statistics, February 1983

TABLE 4-5

LABOR FORCE STATUS OF 25 TO 64 YEAR OLDS BY RACE/ETHNICITY AND YEARS OF SCHOOL COMPLETED, MARCH 1982

[Numbers in thousands]

Labor force status and years of school completed	Men			Women		
	White	Black	Hispanic	White	Black	Hispanic
Population, total	46,452	5,076	2,815	49,027	6,353	3,243
Elementary: 8 years or less	4,728	960	1,036	4,330	999	1,239
High school: 1 to 3 years	5,222	996	371	5,891	1,460	484
4 years only	16,974	1,791	758	22,632	2,363	970
College: 1 to 3 years	7,921	818	374	8,183	934	333
4 years or more	11,607	512	277	7,983	597	217
Labor force, total	41,810	4,196	2,564	29,922	4,122	1,708
Elementary: 8 years or less	3,536	543	895	1,581	413	462
High school: 1 to 3 years	4,394	797	328	2,850	783	234
4 years only	15,492	1,538	727	13,941	1,643	616
College: 1 to 3 years	7,294	733	359	5,474	753	233
4 years or more	11,092	483	255	5,975	533	162
Labor force participation rate	90.0	82.7	91.1	60.8	64.9	52.7
Elementary: 8 years or less	74.8	67.0	86.4	36.4	41.3	37.3
High school: 1 to 3 years	84.1	80.0	88.4	48.4	53.6	48.3
4 years only	91.3	85.9	95.9	61.6	69.5	63.5
College: 1 to 3 years	92.1	89.6	96.0	66.9	80.6	70.0
4 years or more	95.6	94.3	92.1	75.8	89.3	74.7
Unemployment rate	7.2	15.0	10.5	6.4	12.8	11.1
Elementary: 8 years or less	12.0	17.3	13.4	14.5	11.4	18.0
High school: 1 to 3 years	12.6	12.9	14.3	10.4	15.1	18.4
4 years only	8.3	17.3	8.8	6.8	15.6	7.0
College: 1 to 3 years	6.0	14.6	7.8	4.6	10.6	5.6
4 years or more	2.6	8.9	4.7	3.1	5.4	4.9

NOTE: Because of rounding, sums of individual items may not equal totals.

SOURCE: Employment and Earnings, January 1983, p. 65, 66, Bureau of Labor Statistics

TABLE 4-6

EMPLOYED PERSONS BY DETAILED OCCUPATION, SEX AND RACE, 1982

(Numbers in thousands)

Occupation	Total Employed	Percent of Total	
		Females	Blk & Others
Total, 16 years and over	**99,526**	**43.5**	**11.7**
White-collar workers	**53,470**	**53.8**	**9.1**
Professional & technical	**16,951**	**45.1**	**9.7**
Accountants	1,193	38.6	9.2
Architects	94	8.5	9.6
Computer specialists	751	28.5	10.0
Computer programmers	434	32.0	10.4
Computer systems analysts	242	26.4	9.9
Engineers	1,574	5.7	6.9
Aeronautical & astronautical	71	4.2	4.2
Civil	199	2.5	9.0
Electrical & electronic	404	4.0	7.7
Industrial	260	14.2	6.9
Mechanical	240	2.9	6.7
Foresters & conservationists	61	6.6	4.9
Lawyers & judges	630	15.4	3.7
Lawyers	606	15.5	3.6
Librarians, archivists, curators	207	80.7	8.7
Librarians	193	83.4	8.8
Life & physical scientists	320	20.6	9.4
Biological scientists	63	46.0	6.3
Chemists	133	20.3	15.8
Operations & systems researchers and analysts	246	31.7	6.9
Personnel & labor rel. workers	423	49.6	11.1
Physicians, dentists & related prac.	869	14.6	10.7
Dentists	121	3.3	5.0
Pharmacists	168	23.8	10.1
Physicians, medical & osteopathic	486	14.8	13.8
Nurses, dieticians & therapists	1,736	91.8	12.8
Registered nurses	1,415	95.6	8.3
Therapists	252	70.6	10.7
Health technologists & technicians	657	72.9	13.7
Clinical lab. tech. & technicians	266	76.7	16.9
Radiologic tech. & technicians	108	72.2	10.2
Religious workers	347	13.8	6.1
Clergy	285	5.3	7.0
Social scientists	345	38.0	7.5
Economists	200	28.0	7.5
Psychologists	120	55.0	7.5
Social & recreation workers	496	65.5	17.9
Social workers	384	66.4	19.0
Recreation workers	113	61.9	13.3
Teachers, college & university	601	35.4	8.5
Teachers, except college & univ.	3,266	70.7	10.3
Adult education teachers	79	40.5	15.2
Elementary school teachers	1,434	82.4	11.6
Prekindergarten & kindergarten	271	98.5	12.9
Secondary school teachers	1,231	51.9	8.6
Teachers, except college & university, n.e.c.	250	76.0	6.8
Engineering & Science Technicians	1,114	18.3	10.3
Chemical technicians	93	24.7	16.1
Drafters	304	18.1	11.2
Electrical & electronic engineering technicians	314	12.4	11.5
Surveyors	68	1.5	4.4
Technicians, except health, engineering & science	214	22.9	7.0
Airplane pilots	83	3.6	2.4
Radio operators	65	55.4	7.7
Vocational & educational counselors	164	51.8	15.2
Writers, artists & entertainers	1,399	42.9	6.7
Athletes & kindred workers	136	50.7	5.1
Designers	221	32.6	5.4
Editors & reporters	204	51.0	5.9
Musicians & composers	149	28.9	10.7
Painters & sculptors	208	51.9	4.8
Photographers	96	22.9	7.3
Public relations specialists & publicity writers	134	50.0	4.5
Research workers, not specified	191	35.6	10.5
Other professional & tech. workers	53	47.2	5.7
Managers & administrators, ex. farm	**11,493**	**28.0**	**5.7**
Bank officials & financial mgrs	731	37.1	5.1
Buyers & purchasing agents	474	35.7	4.6
Buyers, wholesale & retail trade	195	43.1	5.1
Credit & collection managers	64	48.4	6.3
Health administrators	228	50.9	5.3
Inspectors, except construction & public administration	107	15.0	10.3
Mgrs & superintendents, building	183	52.5	7.7
Office managers, n.e.c.	507	72.6	3.2
Officals & administrators; public administratikon n.e.c.	430	29.3	9.3
Officials of lodges, societies & unions	126	28.6	7.9
Restaurant, cafeteria & bar mgrs	768	40.6	11.5
Sales mgrs & dept. heads, retail	353	39.7	7.1
Sales mgrs, except retail trade	372	12.9	3.0
School administrators, college	130	36.2	13.1
School administrators, elementary & secondary	293	36.2	13.0
All other mgrs & administrators	6,727	19.9	4.7
Sales workers	**6,580**	**45.4**	**5.5**
Advertising agents & sales workers	130	46.9	3.8
Demonstrators	116	94.0	5.2
Hucksters & peddlers	197	78.2	8.1
Insurance agents, brokers & underwriters	645	26.2	7.1
Newspaper carriers & vendors	116	29.3	9.5
Real estate agents & brokers	534	50.2	2.4
Stock & bond sales agents	197	19.8	6.1
Sales workers & sales clerks, n.e.c.	4,639	46.4	5.5
Sales reps, manufact. industries	383	21.4	3.7
Sales reps, wholesale trade	1,020	13.9	2.7
Sales clerks, retail trade	2,447	70.0	7.2
Sales workers, ex. clerks, retail	522	19.2	4.4
Sales workers, serv. & construction	268	42.5	4.9
Clerical workers	**18,446**	**80.7**	**11.8**
Bank tellers	561	92.0	8.0
Billing clerks	154	87.7	6.5
Bookkeepers	1,968	91.8	6.6
Cashiers	1,683	86.8	12.8

SOURCE: Employment and Earnings, January 1983, p. 65, 66, Bureau of Labor Statistics

TABLE 4-6 (continued)

EMPLOYED PERSONS BY DETAILED OCCUPATION, SEX AND RACE, 1982

(Numbers in thousands)

Occupation	Total Employed	Percent of Total	
		Females	Blk & Others
White-collar workers - continued			
Clerical workers - continued			
Clerical supervisors, n.e.c.	270	72.2	10.7
Collectors, bill & account	87	62.1	11.5
Counter clerks, except food	373	76.4	9.7
Dispatchers & starters, vehicle	110	38.2	7.3
Enumerators & interviewers	53	83.0	11.3
Estimators & investigators, n.e.c.	570	58.4	12.8
Expediters & production controllers	257	42.4	8.9
File clerks	278	84.5	21.2
Insurance adjusters, examiners & investigators	200	56.5	10.0
Library attendants & assistants	150	81.3	16.0
Mail carriers, post office	264	17.0	14.0
Mail handlers, except post office	182	47.3	20.9
Messengers & office helpers	115	23.5	19.1
Office machine operators	1,107	74.6	17.7
Bookkeeping machine operators	42	85.7	14.3
Computer equipment operators	588	63.3	15.5
Keypunch operators	364	94.5	20.3
Payroll & timekeeping clerks	224	82.1	8.9
Postal clerks	271	35.1	26.9
Receptionists	672	91.5	8.3
Secretaries	3,847	99.2	7.4
Secretaries, legal	175	99.4	5.7
Secretaries, medical	85	100.0	5.9
Secretaries, n.e.c.	3,587	99.2	7.5
Shipping & receiving clerks	499	24.8	13.8
Statistical clerks	365	81.6	14.0
Stenographers	66	84.8	13.6
Stock clerks & storekeepers	497	36.8	16.1
Teachers aides, ex. monitors	373	92.5	20.1
Telephone operators	283	91.9	17.3
Ticket, station & express agents	54	47.4	13.0
Typists	9 2	96.6	17.4
All other clerical workers	1,87	77.9	13.1
Blue-collar workers	**29,597**	**18.7**	**13.1**
Craft & kindred workers	**12,272**	**7.0**	**8.4**
Carpenters	1,082	1.7	5.9
Brickmasons & stonemasons	145	0.7	15.9
Cement & concrete finishers	55	0.0	32.7
Electricians	628	1.6	8.0
Excavating, grading & road machinery operators	399	1.3	10.3
Painters, construction & main.	473	5.5	11.0
Plumbers & pipefitters	482	0.8	7.5
Structural metal craft workers	81	0.0	3.7
Roofers & slaters	133	0.8	8.3
Blue-collar supervisors, n.e.c.	1,688	12.1	7.8
Machinists & job setters	589	3.1	9.7
Job & die setters, metal	74	2.7	9.5
Machinists	515	3.1	9.7
Metal craft workers, ex. mechanics, machinists & job setters	579	3.8	7.6
Millwrights	89	0.0	3.4
Molders, metal	42	19.0	21.4
Sheet-metal workers & tinsmiths	146	3.4	8.9
Tool & die makers	162	2.5	2 [illegible]
Mechanics, automobile	1,236	1.0	[illegible]
Automobile body repairers	197	1.5	6. [illegible]

Occupation	Total Employed	Percent of Total	
		Females	Blk & Others
Blue-collar workers - continued			
Craft & kindred - continued			
Mechanics - continued			
Automobile mechanics	1,039	0.9	9.4
Mechanics, except automobiles	2,122	2.6	7.8
Air-conditioning, heating & refrigeration mechanics	217	0.0	6.9
Aircraft mechanics	130	3.8	10.8
Data processing machine repairers	84	7.1	10.7
Farm implement mechanics	56	0.0	7.1
Heavy equipment mech., incl. diesel	946	1.5	7.0
Household appliance mechanics	150	3.3	7.3
Office machine repairers	78	6.4	9.0
Radio & television repairers	111	5.4	8.1
Railroad & car shop mechanics	45	2.2	15.6
Printing craft workers	454	28.2	7.7
Compositors and typesetters	192	38.0	8.3
Printing press operators	183	12.6	6.6
Bakers	157	47.8	10.2
Cabinetmakers	80	6.3	6.3
Carpet installers	85	1.2	5.9
Crane, derrick & hoist operators	120	0.8	12.5
Decorators & window dressers	123	73.2	4.1
Electric power line & cable installers & repairers	110	0.9	10.0
Inspectors, n.e.c.	136	13.2	10.3
Locomotive engineers	37	2.7	2.7
Stationary engineers	193	2.1	8.3
Tailors	23	43.5	8.7
Telephone instal. & repairers	304	10.9	9.2
Telephone line instal. & repair.	104	4.8	5.8
Upholsterers	61	23.0	9.8
All other craft workers	593	16.9	10.6
Operatives, except transport	**9,429**	**40.7**	**16.6**
Assemblers	1,087	53.8	17.7
Bottling & canning operatives	43	46.5	16.3
Checkers, examiners & inspectors, manufacturing	729	53.1	16.3
Clothing ironers & pressers	118	76.3	40.7
Cutting operatives, n.e.c.	209	35.4	15.8
Dressmakers, except factory	112	96.4	17.9
Drillers, earth	53	0.0	3.8
Dry wall installers & lathers	87	1.1	6.9
Filers, polishers, sanders & buffers	113	30.1	13.3
Furnace tenders, smelters & pourers, metal	51	7.8	23.5
Garage workers & gas station attend.	320	5.3	11.6
Laundry & dry cleaning oper., n.e.c.	188	66.5	25.4
Meat cutters & butchers, ex. manuf.	183	6.6	9.8
Meat cutters & butchers, manufac.	93	35.5	17.2
Mine operatives, n.e.c.	222	1.4	6.3
Mixing operatives	78	5.1	21.8
Packers & wrappers, excl. meat & produce	582	60.8	21.0
Painters, manufactured articles	139	15.8	14.4
Photographic process workers	89	48.3	6.7
Precision machine operatives	275	12.4	8.0
Drill press operatives	41	26.8	12.2
Grinding machine operatives	102	8.8	8.8
Lathe & milling mach. operatives	83	9.6	6.0

SOURCE: Employment and Earnings, January 1983, p. 65, 66, Bureau of Labor Statistics

TABLE 4-6 (continued)

EMPLOYED PERSONS BY DETAILED OCCUPATION, SEX AND RACE, 1982

(Numbers in thousands)

Occupation	Total Employed	Percent of Total	
		Females	Blk & Others
Blue-collar workers - continued			
Operatives - continued			
Punch and stamping press operatives	96	38.5	15.6
Sawyers	112	12.5	13.4
Sewers & stichers	735	95.4	21.6
Shoemaking machine operatives	72	73.6	11.1
Furnace tenders & stokers, exc. metal	67	3.0	16.4
Textile operatives	270	63.0	26.3
Spinners, twisters & winders	97	69.1	32.0
Welders & flame cutters	602	4.8	11.8
Winding operatives, n.e.c.	50	48.0	20.0
All other operatives, exc. transport	2,654	32.1	16.5
Transport equipment operatives	1,377	8.9	14.7
Busdrivers	35[illegible]	46.6	21.2
Delivery & route workers	374	9.6	8.7
Forklift & tow motor operatives	326	8.0	19.[illegible]
Railroad switch operators	31	0.[illegible]	3.2
Taxicab drivers & chauffeurs	152	9.9	24.[illegible]
Truckdrivers	1,841	2.1	13.5
All other transport equipment oper.	99	2.2	17.2
Nonfarm laborers	4,518	11.7	17.4
Animal caretakers	101	55.4	4.0
Construction laborers including carpenters' helpers	786	3.2	18.8
Freight & material handlers	696	9.8	18.0
Garbage collectors	73	2.7	41.1
Gardeners & grounds keepers	722	5.0	17.9
Timber cutting & logging workers	91	1.1	13.2
Stockhandlers	972	24.5	15.0
Vehicle washers & equipment cleaners	183	13.7	21.3
Warehouse laborers, n.e.c.	278	6.8	16.9
All other nonfarm laborers	616	9.4	17.5
Service workers	13,736	61.9	19.7
Private households	1,042	96.9	29.9
Child care workers	469	97.4	9.8
Cleaners & servants	439	95.9	48.5
Housekeepers	110	98.2	39.1
Blue-collar workers - continued			
Service workers, exc. priv. hsehlds	12,694	59.0	18.8
Cleaning workers	2,515	38.3	27.5
Lodging quarters cleaners	184	96.2	37.5
Building interior cleaners, n.e.c.	926	57.9	29.0
Janitors & sextons	1,406	17.6	25.2
Food service workers	4,760	65.7	14.5
Bartenders	342	50.0	5.0
Waiters' assistants	231	19.9	13.4
Cooks	1,396	49.9	21.0
Dishwashers	272	27.6	18.4
Food counter & fountain workers	463	84.9	12.1
Waiters	1,496	88.6	7.8
Food Service workers, n.e.c.	560	74.6	23.0
Health service workers	2,022	89.7	24.7
Dental assistants	151	98.0	5.3
Health aides, exclud. nursing	333	86.2	18.0
Nursing aides, orderlies	1,136	87.1	31.3
Practical nurses	400	97.0	19.3
Personal service workers	1,850	76.9	14.5
Attendants	335	54.6	11.9
Barbers	100	[illegible].9	15.0
Child care workers	472	96.2	14.2
Hairdressers & cosmetologists	573	89.5	8.9
Housekeepers, excl. priv. hsehlds	182	69.8	23.1
Welfare service aides	90	93.3	37.8
Protective service workers	1,546	10.9	15.1
Firefighters	218	0.5	9.2
Guards	685	12.7	21.3
Police & detectives	505	6.7	10.5
Sheriffs & bailiffs	77	11.7	13.[illegible]
Farm workers	2,723	17.5	7.2
Farmers & farm managers	1,452	11.8	2.1
Farmers (owners & tenants)	1,415	11.9	2.1
Farm laborers & supervisors	1,271	24.1	13.1
Farm laborers, wage workers	987	15.4	16.1
Farm laborers, unpaid family	244	61.9	1.2

NOTE: N.E.C. is an abbreviation for "not elsewhere classified" and designates broad categories of occupations which cannot be more specifically identified.

SOURCE: 1980 Census, Special EEO File, Bureau of the Census

TABLE 4-7

Professional and Technical Workers by Occupation, Sex and Race/Ethnicity, 1980

Occupations	All Persons	Males							Females						
		Total Males	Males Not of Spanish Origin					Males of Spanish Origin	Total Females	Females Not of Spanish Origin					Females of Spanish Origin
			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.	
CIVILIAN LABOR FORCE, 16 YEARS AND OVER	104449817 100.00%	59926488 57.37%	49800137 47.68%	5254596 5.03%	311862 0.30%	908824 0.87%	58011 0.06%	3593058 3.44%	44523329 42.63%	35877061 34.35%	5182629 4.96%	234595 0.22%	787596 0.75%	41783 0.04%	2399665 2.30%
Accountants and Auditors	1012857 100.00%	626558 61.86%	563916 55.68%	23174 2.29%	1272 0.13%	19212 1.90%	562 0.06%	18422 1.82%	386299 38.14%	324773 32.07%	30540 3.02%	1553 0.15%	15608 1.54%	445 0.04%	13380 1.32%
Actuaries	10319 100.00%	7682 74.45%	7280 70.55%	91 0.88%	0 0.00%	259 2.51%	6 0.06%	46 0.45%	2637 25.55%	2437 23.62%	94 0.91%	0 0.00%	78 0.76%	0 0.00%	28 0.27%
Agricultural/Food Scientists	24589 100.00%	19009 77.31%	17236 70.10%	797 3.24%	47 0.19%	438 1.78%	12 0.05%	479 1.95%	5580 22.69%	4780 19.44%	437 1.78%	37 0.15%	198 0.81%	0 0.00%	128 0.52%
Airplane Pilots/ Navigators	76188 100.00%	75149 98.64%	72545 95.22%	630 0.83%	285 0.37%	445 0.58%	50 0.07%	1194 1.57%	1039 1.36%	922 1.21%	26 0.03%	0 0.00%	13 0.02%	0 0.00%	78 0.10%
Architects	107893 100.00%	98743 91.69%	88047 81.76%	2643 2.45%	178 0.17%	3769 3.50%	123 0.11%	3983 3.70%	8950 8.31%	7852 7.29%	303 0.28%	30 0.03%	395 0.37%	0 0.00%	370 0.34%
Archivists/Curators	15302 100.00%	7735 50.55%	6743 44.07%	525 3.43%	33 0.22%	163 1.07%	6 0.04%	265 1.73%	7567 49.45%	6694 43.75%	551 3.60%	51 0.33%	71 0.46%	9 0.06%	191 1.25%
Artists/Performers/ Related Workers	49653 100.00%	29358 59.12%	25242 50.84%	1693 3.41%	220 0.44%	484 0.97%	61 0.12%	1658 3.34%	20297 40.88%	18416 37.09%	807 1.63%	126 0.25%	313 0.63%	65 0.13%	570 1.15%
Actors/Directors	67180 100.00%	44049 65.57%	39591 58.93%	2384 3.55%	191 0.28%	513 0.76%	17 0.03%	1353 2.01%	23131 34.43%	20343 30.28%	1456 2.17%	76 0.11%	337 0.50%	29 0.04%	890 1.32%
Authors	45748 100.00%	25409 55.54%	23809 52.04%	592 1.29%	85 0.19%	276 0.60%	56 0.12%	591 1.29%	20339 44.46%	19094 41.74%	616 1.35%	64 0.14%	166 0.36%	43 0.09%	356 0.78%
Dancers	13194 100.00%	3350 25.39%	2631 19.94%	317 2.40%	19 0.14%	140 1.06%	0 0.00%	243 1.84%	9844 74.61%	7934 60.13%	817 6.19%	83 0.63%	448 3.40%	18 0.14%	544 4.12%
Musicians/Composers	140556 100.00%	99065 70.48%	84413 60.06%	7157 5.09%	486 0.35%	1393 0.99%	143 0.10%	5473 3.89%	41491 29.52%	38021 27.05%	1942 1.38%	152 0.11%	628 0.45%	29 0.02%	719 0.51%
Painters/Sculptors/ Artists	153162 100.00%	79445 51.87%	69374 45.29%	3316 2.17%	653 0.43%	1938 1.27%	112 0.07%	4052 2.65%	73717 48.13%	68794 44.92%	1474 0.96%	415 0.27%	1388 0.91%	73 0.05%	1573 1.03%
Photographers	94762 100.00%	72496 76.50%	63991 67.53%	3832 4.04%	207 0.22%	1366 1.44%	115 0.12%	2985 3.15%	22266 23.50%	20198 21.31%	952 1.00%	139 0.15%	212 0.22%	0 0.00%	765 0.81%

SOURCE: 1980 Census, Special EEO File, Bureau of the Census

TABLE 4-7 (continued)

Professional and Technical Workers by Occupation, Sex and Race/Ethnicity, 1980

Occupations	All Persons	Males							Females						
		Total Males	Males Not of Spanish Origin					Males of Spanish Origin	Total Females	Females Not of Spanish Origin					Females of Spanish Origin
			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.	
Atmospheric/Space Scientists	8415	6988	6383	281	45	106	26	145	1429	1219	129	2	26	0	53
	100.00%	83.02%	75.85%	3.34%	0.53%	1.26%	0.31%	1.72%	16.98%	14.49%	1.53%	0.02%	0.31%	0.00%	0.63%
Biological/Life Scientists	46079	30840	27825	871	60	1483	60	541	15239	12898	806	52	1012	32	439
	100.00%	66.93%	60.39%	1.89%	0.13%	3.22%	0.13%	1.17%	33.07%	27.99%	1.75%	0.11%	2.20%	0.07%	0.95%
Chemists, ex. Biochemists	102239	81699	70726	3571	145	5322	142	1794	20540	15849	1456	58	2348	39	792
	100.00%	79.91%	69.18%	3.49%	0.14%	5.21%	0.14%	1.75%	20.09%	15.50%	1.42%	0.06%	2.30%	0.04%	0.77%
Clergy	283044	266610	242223	15093	691	3113	159	5331	16434	14881	952	68	155	10	568
	100.00%	94.19%	85.58%	5.33%	0.24%	1.10%	0.06%	1.88%	5.81%	5.19%	0.34%	0.02%	0.05%	0.00%	0.20%
Computer Programmers	317873	218716	193052	9890	604	8845	246	6079	98957	82561	7856	266	5478	118	2680
	100.00%	68.85%	60.77%	3.11%	0.19%	2.78%	0.08%	1.91%	31.15%	25.99%	2.47%	0.08%	1.72%	0.04%	0.84%
Computer Systems Analysts/Scientists	202851	157140	141521	5999	369	5435	175	3641	45511	38952	3405	170	1772	50	1162
	100.00%	77.54%	69.83%	2.96%	0.18%	2.68%	0.09%	1.80%	22.46%	19.22%	1.68%	0.08%	0.87%	0.02%	0.57%
Counselors, Educational/ Vocational	198258	90587	73447	10807	1059	1219	93	4162	107669	83405	17183	1379	1395	99	4208
	100.00%	45.69%	37.05%	5.35%	0.53%	0.61%	0.05%	2.10%	54.31%	42.07%	8.67%	0.70%	0.70%	0.05%	2.12%
Designers	338374	189604	151191	5928	481	4578	174	7252	188770	154070	4834	333	3458	109	5966
	100.00%	50.12%	44.68%	1.75%	0.14%	1.35%	0.05%	2.14%	49.88%	45.53%	1.43%	0.10%	1.02%	0.03%	1.76%
Dieticians	67270	6787	4224	1907	25	179	27	425	60483	43289	12493	307	2304	32	2058
	100.00%	10.09%	6.28%	2.83%	0.04%	0.27%	0.04%	0.63%	89.91%	64.35%	18.57%	0.46%	3.43%	0.05%	3.06%
Economists	95555	67218	61773	2096	189	1599	98	1483	28347	25241	1828	68	565	37	608
	100.00%	70.34%	64.64%	2.19%	0.18%	1.67%	0.10%	1.55%	29.66%	26.41%	1.91%	0.07%	0.59%	0.04%	0.64%
Editors/Reporters	210831	106942	97766	3292	271	1866	182	3585	103889	93820	4161	339	1499	148	3922
	100.00%	50.72%	46.37%	1.56%	0.13%	0.89%	0.08%	1.70%	49.28%	44.50%	1.97%	0.16%	0.71%	0.07%	1.86%
Engineers*	1445042	1388801	1252362	29420	28523	59967	1734	30304	56241	44494	4527	225	2674	98	1564
	100.00%	6.11%	86.66%	2.04%	1.97%	4.15%	0.12%	2.10%	3.89%	3.08%	0.31%	0.02%	0.19%	0.01%	0.11%
Forestry/Conservation Scientists	35587	31985	29662	955	467	205	33	663	3582	3133	188	69	83	0	129
	100.00%	89.93%	83.40%	2.69%	1.31%	0.58%	0.09%	1.86%	10.07%	8.81%	0.53%	0.19%	0.18%	0.00%	0.36%
Geologists/Geodesists	46127	40985	38969	488	85	821	46	776	5142	4768	205	10	91	5	63
	100.00%	88.85%	84.48%	1.06%	0.18%	1.35%	0.10%	1.68%	11.15%	10.34%	0.44%	0.02%	0.20%	0.01%	0.14%

SOURCE: 1980 Census, Special EEO File, Bureau of the Census

TABLE 4-7 (continued)

Executives and Managers by Field, Sex and Race/Ethnicity, 1980

Occupations	All Persons	Males							Females						
		Total Males	Males Not of Spanish Origin					Males of Spanish Origin	Total Females	Females Not of Spanish Origin					Females of Spanish Origin
			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.	
Executive and Managerial Occupations	14465792	10703261	9616261	486311	38014	146882	7919	407874	3762531	3228159	297396	17307	58458	3161	158052
	100.00%	73.99%	66.48%	3.36%	0.26%	1.02%	0.05%	2.82%	26.01%	22.32%	2.06%	0.12%	0.40%	0.02%	1.09%
Business/Promotion Agents	20807	13780	12183	806	34	134	12	611	6827	6227	321	25	79	7	168
	100.00%	66.87%	59.12%	3.91%	0.16%	0.65%	0.06%	2.97%	33.13%	30.22%	1.56%	0.12%	0.38%	0.03%	0.82%
Education/Related Fields Administrators	387538	239766	210678	20154	945	1718	158	6113	147772	121224	19193	1050	1532	101	4672
	100.00%	61.87%	54.36%	5.20%	0.24%	0.44%	0.04%	1.58%	38.13%	31.28%	4.95%	0.27%	0.40%	0.03%	1.21%
Financial Managers	409844	281218	261088	6792	402	5242	141	7553	128626	116748	5989	317	1678	74	3822
	100.00%	68.62%	63.70%	1.66%	0.10%	1.28%	0.03%	1.84%	31.38%	28.49%	1.46%	0.08%	0.41%	0.02%	0.93%
Managers/Administrators, Misc., Salaried	4658661	3404912	3120455	112058	9748	53899	2792	105960	1253749	1111272	75864	5482	18142	1170	42019
	100.00%	73.09%	66.98%	2.41%	0.21%	1.16%	0.06%	2.27%	26.91%	23.85%	1.62%	0.12%	0.39%	0.03%	0.90%
Managers/Administrators Misc., Self-Employed	573846	419697	377417	12241	1258	12124	540	16117	154149	136580	4897	635	6003	159	6075
	100.00%	73.14%	65.77%	2.13%	0.22%	2.11%	0.09%	2.81%	26.86%	23.80%	0.82%	0.11%	1.05%	0.03%	1.06%
Marketing/Advertising/ Related Fields Mgrs.	688875	567382	540409	9084	990	5346	260	11293	121513	111891	4310	327	1465	93	3427
	100.00%	82.38%	78.45%	1.32%	0.14%	0.78%	0.04%	1.64%	17.64%	16.24%	0.63%	0.05%	0.21%	0.01%	0.50%
Medicine/Health Managers	110881	54583	48300	3872	205	709	38	1459	56298	47788	5608	359	805	16	1724
	100.00%	49.23%	43.56%	3.49%	0.18%	0.64%	0.03%	1.32%	50.77%	43.10%	5.06%	0.32%	0.73%	0.01%	1.55%
Personnel/Labor Relations Managers	219945	140747	124144	8051	439	1777	89	6247	79198	68296	6198	302	1142	54	3206
	100.00%	63.99%	56.44%	3.66%	0.20%	0.81%	0.04%	2.84%	36.01%	31.05%	2.82%	0.14%	0.52%	0.02%	1.46%
Properties/Real Estate Managers	200072	117835	100921	7659	564	1317	128	7246	82237	73054	4879	493	824	39	2948
	100.00%	58.90%	50.44%	3.83%	0.28%	0.66%	0.06%	3.62%	41.10%	36.51%	2.44%	0.25%	0.41%	0.02%	1.47%
Proprietors/Supervisors/ Sales, Self-Employed	451356	324838	293777	9577	920	7967	272	12325	126518	114264	3844	536	3655	69	4350
	100.00%	71.97%	65.09%	2.12%	0.20%	1.77%	0.06%	2.73%	28.03%	25.32%	0.81%	0.12%	0.81%	0.02%	0.96%
Protective Services Administrators	26237	23769	22141	824	144	98	7	555	2468	2053	270	21	16	7	101
	100.00%	90.59%	84.39%	3.14%	0.55%	0.37%	0.03%	2.12%	9.41%	7.82%	1.03%	0.08%	0.06%	0.03%	0.38%
Public Administration Administrators/Officials	295983	196465	171787	13402	1861	2815	188	6612	99518	83182	11013	818	1053	73	3379
	100.00%	66.38%	58.04%	4.53%	0.63%	0.88%	0.06%	2.23%	33.62%	28.10%	3.72%	0.28%	0.36%	0.02%	1.14%
Public Administration Chief Exec./ Gen. Adminis.	35777	27458	22418	3104	429	251	35	1223	8319	6078	1655	111	148	12	315
	100.00%	76.75%	62.65%	8.68%	1.20%	0.70%	0.10%	3.42%	23.25%	16.99%	4.63%	0.31%	0.41%	0.03%	0.88%
Purchasing Managers	71199	56088	52456	1433	131	655	49	1384	15111	13389	1018	46	235	15	410
	100.00%	78.78%	73.68%	2.01%	0.18%	0.92%	0.07%	1.92%	21.22%	18.81%	1.43%	0.06%	0.33%	0.02%	0.58%

SOURCE: 1980 Census, Special EEO File, Bureau of the Census

TABLE 4-7 (continued)

Professional and Technical Workers by Occupation, Sex and Race/Ethnicity, 1980

Occupations	All Persons	Males							Females						
		Total Males	Males Not of Spanish Origin					Males of Spanish Origin	Total Females	Females Not of Spanish Origin					Females of Spanish Origin
			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.	
Lawyers	501834	432559	412526	9224	750	2710	332	7017	69275	61893	4226	207	943	93	1913
	100.00%	86.20%	82.20%	1.84%	0.15%	0.54%	0.07%	1.40%	13.80%	12.33%	0.84%	0.04%	0.19%	0.02%	0.38%
Judges	27845	23083	21213	1162	130	124	23	431	4762	4051	521	50	18	0	122
	100.00%	82.90%	76.18%	4.17%	0.47%	0.45%	0.08%	1.55%	17.10%	14.55%	1.87%	0.18%	0.06%	0.00%	0.44%
Legislators	10669	7112	6192	399	253	118	4	146	3557	3233	166	65	48	11	34
	100.00%	66.66%	58.04%	3.74%	2.37%	1.11%	0.04%	1.37%	33.34%	30.30%	1.56%	0.61%	0.45%	0.10%	0.32%
Librarians	187379	32779	27836	2347	120	1056	72	1348	154600	136708	11366	499	2876	123	3028
	100.00%	17.49%	14.86%	1.25%	0.06%	0.56%	0.04%	0.72%	82.51%	72.96%	6.07%	0.27%	1.53%	0.07%	1.62%
Mathematical Scientists, Misc.	6401	5188	4576	248	25	200	7	132	1213	959	179	0	60	0	15
	100.00%	81.05%	71.49%	3.87%	0.39%	3.12%	0.11%	2.06%	18.95%	14.98%	2.80%	0.00%	0.94%	0.00%	0.23%
Medical Scientists	20065	11904	10348	434	23	673	33	393	8161	6870	441	28	558	25	239
	100.00%	59.33%	51.57%	2.16%	0.11%	3.35%	0.16%	1.96%	40.67%	34.24%	2.20%	0.14%	2.78%	0.12%	1.19%
Medical/Health Practitioners															
Dentists	125291	116916	108990	2666	167	3226	55	1812	8375	6890	468	18	606	12	381
	100.00%	93.32%	86.99%	2.13%	0.13%	2.57%	0.04%	1.45%	6.68%	5.50%	0.37%	0.01%	0.48%	0.01%	0.30%
Nurses, Licensed Practical	435176	14764	10652	2910	128	322	18	734	420412	322480	74942	2662	5575	425	14328
	100.00%	3.39%	2.45%	0.67%	0.03%	0.07%	0.00%	0.17%	96.61%	74.10%	17.22%	0.61%	1.28%	0.10%	3.29%
Nurses, Registered	1285299	52755	42605	5363	175	1892	110	2610	1232544	1071709	90003	3681	41054	1161	24930
	100.00%	4.10%	3.31%	0.42%	0.01%	0.15%	0.01%	0.20%	95.90%	83.38%	7.00%	0.29%	3.19%	0.09%	1.94%
Optometrists	24605	22569	21544	198	36	461	8	322	2036	1765	56	8	97	0	110
	100.00%	91.73%	87.56%	0.80%	0.15%	1.87%	0.03%	1.31%	8.27%	7.17%	0.23%	0.03%	0.39%	0.00%	0.45%
Pharmacists	145637	110635	101051	2949	158	4313	136	2028	35002	29385	1766	80	2269	29	1464
	100.00%	75.97%	69.39%	2.02%	0.11%	2.96%	0.09%	1.39%	24.03%	20.18%	1.21%	0.06%	1.56%	0.02%	1.01%
Physicians	433255	375289	317142	10090	386	30656	732	16283	57966	40700	3153	127	11262	154	2570
	100.00%	86.62%	73.20%	2.33%	0.09%	7.08%	0.17%	3.76%	13.38%	9.39%	0.73%	0.03%	2.60%	0.04%	0.59%
Podiatrists	7781	7124	6805	203	0	54	0	62	657	538	78	0	41	0	0
	100.00%	91.56%	87.46%	2.61%	0.00%	0.69%	0.00%	0.80%	8.44%	6.91%	1.00%	0.00%	0.53%	0.00%	0.00%
Veterinarians	34355	29797	28706	402	56	359	23	251	4558	4216	120	6	73	6	137
	100.00%	86.73%	83.56%	1.17%	0.16%	1.04%	0.07%	0.73%	13.27%	12.27%	0.35%	0.02%	0.21%	0.02%	0.40%
Health Diagnosing Practitioners, Misc.	21539	18851	17954	191	28	444	18	216	2688	2375	71	6	134	0	102
	100.00%	87.52%	83.36%	0.89%	0.13%	2.06%	0.08%	1.00%	12.48%	11.03%	0.33%	0.03%	0.62%	0.00%	0.47%

SOURCE: 1980 Census, Special EEO File, Bureau of the Census

TABLE 4-7 (continued)

Professional and Technical Workers by Occupation, Sex and Race/Ethnicity, 1980

Occupations	All Persons	Males							Females						
		Total Males	Males Not of Spanish Origin					Males of Spanish Origin	Total Females	Females Not of Spanish Origin					Females of Spanish Origin
			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.	
Management Analysts	118581	88652	82171	2994	296	1262	120	1809	29929	25971	2483	177	410	31	857
	100.00%	74.76%	69.30%	2.52%	0.25%	1.06%	0.10%	1.53%	25.24%	21.90%	2.09%	0.15%	0.35%	0.03%	0.72%
Operations/Systems Researchers/Analysts	80876	58435	52908	2458	158	1488	70	1353	22441	18860	2418	81	557	6	519
	100.00%	72.25%	65.42%	3.04%	0.20%	1.84%	0.09%	1.67%	27.75%	23.32%	2.99%	0.10%	0.69%	0.01%	0.64%
Physicists/Astronomers	22473	21253	19352	314	30	1152	81	324	1220	1102	41	0	40	0	37
	100.00%	94.57%	86.11%	1.40%	0.13%	5.13%	0.36%	1.44%	5.43%	4.90%	0.18%	0.00%	0.18%	0.00%	0.16%
Psychologists	92929	49102	44635	2362	143	515	68	1379	43827	37766	4100	193	546	94	1128
	100.00%	52.84%	48.03%	2.54%	0.15%	0.55%	0.07%	1.48%	47.16%	40.64%	4.41%	0.21%	0.59%	0.10%	1.21%
Public Relations Specialists	120037	61442	55764	2980	189	766	88	1655	58595	52340	3495	265	657	28	1810
	100.00%	51.19%	46.46%	2.48%	0.16%	0.64%	0.07%	1.38%	48.81%	43.60%	2.91%	0.22%	0.55%	0.02%	1.51%
Social Scientists, Misc.	13477	8177	7483	214	38	172	19	251	5300	4739	242	30	95	5	189
	100.00%	60.67%	55.52%	1.59%	0.28%	1.28%	0.14%	1.86%	39.33%	35.16%	1.80%	0.22%	0.70%	0.04%	1.40%
Sociologists	2550	1489	1294	111	0	44	0	40	1061	927	42	12	48	0	32
	100.00%	58.39%	50.75%	4.35%	0.00%	1.73%	0.00%	1.57%	41.61%	36.35%	1.65%	0.47%	1.88%	0.00%	1.25%
Social Workers	459984	161258	118446	26559	1623	2601	271	11758	298726	215573	60946	2565	3765	403	15474
	100.00%	35.06%	25.75%	5.77%	0.35%	0.57%	0.06%	2.56%	64.94%	46.87%	13.25%	0.56%	0.82%	0.09%	3.36%
Statisticians	30200	15684	13711	786	41	733	15	398	14516	11917	1595	57	497	11	439
	100.00%	51.93%	45.40%	2.60%	0.14%	2.43%	0.05%	1.32%	48.07%	39.46%	5.28%	0.19%	1.65%	0.04%	1.45%
Surveying/Mapping Scientists	31634	30313	28089	713	279	222	16	994	1321	1173	44	13	10	8	73
	100.00%	95.82%	88.79%	2.25%	0.88%	0.70%	0.05%	3.14%	4.18%	3.71%	0.14%	0.04%	0.03%	0.03%	0.23%
Teachers, Elem./Secondary	3363514	950590	842201	67854	3765	8798	810	27162	2413924	2036833	271570	10096	24329	1439	68657
	100.00%	28.26%	25.04%	2.02%	0.11%	0.26%	0.02%	0.81%	71.74%	60.56%	8.07%	0.30%	0.72%	0.04%	2.04%
Teachers, Postsecondary*	995755	540289	481153	23872	1918	18007	921	14418	455466	401387	30443	1751	8608	463	12814
	100.00%	54.26%	48.32%	2.40%	0.19%	1.81%	0.09%	1.45%	45.74%	40.31%	3.06%	0.18%	0.86%	0.05%	1.29%
Technical Writers	49596	30984	28753	1097	100	475	29	530	18612	16864	1156	81	160	23	328
	100.00%	62.47%	57.97%	2.21%	0.20%	0.96%	0.06%	1.07%	37.53%	34.00%	2.33%	0.16%	0.32%	0.05%	0.66%
Urban Planners	13337	10128	8732	646	81	274	8	387	3209	2561	441	16	58	0	133
	100.00%	75.94%	65.47%	4.84%	0.61%	2.05%	0.06%	2.90%	24.06%	19.20%	3.31%	0.12%	0.43%	0.00%	1.00%
Underwriters	18597	7752	7021	393	12	127	0	199	10845	9522	774	21	105	11	412
	100.00%	41.68%	37.75%	2.11%	0.06%	0.68%	0.00%	1.07%	58.32%	51.20%	4.16%	0.11%	0.56%	0.06%	2.22%

* Further breakouts are in the subject matter sections

SOURCE: Characteristics of Doctoral Scientists and Engineers, 1981, National Science Foundation, NSF 82-332

TABLE 4-8

DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, SEX AND RACE, 1981

	Sex	All Races		White		Black		American Indian		Asian		No Report
		No.	%	No.	%	No.	%	No.	%	No.	%	No.
TOTAL	**Total**	**363,866**		**322,853**	**88.7**	**4,609**	**1.3**	**2,325**	**0.6**	**27,857**	**7.76**	**6,222**
ALL FIELDS	**Women**	**45,747**	**12.6**	**40,653**		**1,098**		**320**		**3,113**		**563**
PHYSICAL	**Total**	**67,693**		**59,740**	**88.3**	**644**	**1.0**	**296**	**0.4**	**5,838**	**8.6**	**1,175**
SCIENTISTS	**Women**	**4,354**	**6.4**	**3,540**		**41**		**8**		**696**		**69**
Chemists	Total	45,376		40,150	88.5	380	0.8	201	0.4	3,898	8.6	747
	Women	3,658	8.1	2,935		34		8		617		64
Physicists/	Total	22,317		19,590	87.8	264	1.2	95	0.4	1,940	8.7	428
Astronomers	Women	696	3.1	605		7		*		79		5
MATHEMATICAL	**Total**	**16,470**		**14,486**	**88.0**	**200**	**1.2**	**74**	**0.4**	**1,221**	**7.4**	**489**
SCIENTISTS	**Women**	**1,463**	**8.9**	**1,232**		**17**		**20**		**178**		**16**
Mathema-	Total	13,819		12,256	88.7	177	1.3	54	0.4	937	6.8	393
ticians	Women	1,166	8.4	1,015		17		2		116		16
Statis-	Total	2,651		2,228	84.0	23	0.9	20	0.8	284	10.7	96
ticians	Women	297	11.2	217		*		18		62		*
COMPUTER	**Total**	**9,066**		**7,942**	**87.6**	**20**	**0.2**	**17**	**0.2**	**886**	**9.8**	**201**
SCIENTISTS	**Women**	**714**	**7.9**	**589**		**3**		**3**		**97**		**22**
ENVIRON.	**Total**	**16,589**		**15,547**	**93.7**	**41**	**0.2**	**56**	**0.3**	**749**	**4.5**	**196**
SCIENTISTS	**Women**	**906**	**5.5**	**833**		**10**		**5**		**50**		**8**
Earth	Total	12,605		11,845	94.0	32	0.3	47	0.4	535	4.2	146
Scientists	Women	615	4.9	578		8		5		16		8
Oceano-	Total	1,818		1,701	93.6	7	0.4	7	0.4	102	5.6	1
graphers	Women	206	11.3	197		2		*		7		*
Atmospheric	Total	2,166		2,001	92.4	2	0.1	2	0.1	112	5.2	49
Scientists	Women	85	3.9	58		*		*		27		*
ENGINEERS	**Total**	**58,311**		**47,678**	**81.8**	**270**	**0.5**	**437**	**0.7**	**9,055**	**15.5**	**871**
	Women	**783**	**1.3**	**623**		**7**		**14**		**127**		**12**
LIFE	**Total**	**93,848**		**84,329**	**89.9**	**1,185**	**1.3**	**551**	**0.6**	**6,416**	**6.8**	**1,367**
SCIENTISTS	**Women**	**15,221**	**16.2**	**13,285**		**330**		**109**		**1,388**		**109**
Biological	Total	54,442		48,663	89.4	663	1.2	335	0.6	4,025	7.4	756
Scientists	Women	10,646	19.6	9,281		248		95		944		701
Agricultural	Total	17,270		15,998	92.6	209	1.2	113	0.7	771	4.5	179
Scientists	Women	530	3.1	419		3		2		104		2
Medical	Total	22,136		19,668	88.9	313	1.4	103	0.5	1,620	7.3	432
Scientists	Women	4,045	18.3	3,585		79		12		340		29
PSYCHO-	**Total**	**45,416**		**42,666**	**93.9**	**853**	**1.9**	**475**	**1.0**	**609**	**1.3**	**813**
LOGISTS	**Women**	**12,817**	**28.2**	**11,854**		**390**		**126**		**254**		**193**
SOCIAL	**Total**	**56,473**		**50,465**	**89.4**	**1,396**	**2.5**	**419**	**0.7**	**3,083**	**5.5**	**1,110**
SCIENTISTS	**Women**	**9,489**	**16.8**	**8,697**		**300**		**35**		**323**		**134**
Economists	Total	14,294		12,574	88.0	234	1.6	242	1.7	1,165	8.2	79
	Women	1,263	8.8	1,175		12		4		58		14
Sociologists/	Total	11,909		10,804	90.7	343	2.9	65	0.5	427	3.6	270
Anthropol.	Women	3,270	27.5	2,980		101		16		98		75
Other Social	Total	30,270		27,087	89.5	819	2.7	112	0.4	1,491	4.9	761
Scientists	Women	4,956	16.4	4,542		187		15		167		45

* No cases reported.

Source: National Science Foundation. NSF 82-332

SOURCE: Science, Engineering and Humanities Doctorates in the U.S., 1981 Profile, National Research Council, 1982

TABLE 4-9

DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, SEX AND EMPLOYMENT STATUS, 1981

FIELD OF PhD	TOTAL			LABOR FORCE			LABOR FORCE PARTICIPATION RATES			UNEMPLOYMENT RATES		
	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women
All Fields	358,600	314,100	44,500	340,900	300,100	40,800	95.1	95.5	91.8	0.8	0.6	2.4
Math	19,000	17,400	1,600	18,200	16,700	1,500	95.8	96.0	93.8	0.5	0.5	1.2
Computer Sciences	2,200	2,000	200	2,200	2,000	200	100.0	100.0	100.0	0.2	0.1	1.7
Physics/Astron.	29,200	28,300	900	28,300	27,500	800	96.9	97.2	89.0	0.6	0.5	1.8
Chemistry	48,000	44,500	3,500	45,000	41,800	3,200	93.8	93.9	91.4	0.7	0.6	2.1
Earth/Environ. Sci.	12,400	11,800	600	11,900	11,300	600	96.0	95.8	100.0	0.8	0.7	1.7
Engineering	52,900	52,400	500	51,600	51,100	500	97.5	97.5	100.0	0.1	0.1	0.8
Agricultural Sciences	16,500	16,000	500	15,100	14,700	400	91.5	91.9	80.0	0.4	0.4	1.5
Medical Sciences	11,100	9,200	1,900	10,600	8,800	1,800	95.5	95.6	94.7	0.7	0.3	2.8
Biological Sciences	64,800	52,500	12,300	60,500	49,500	11,000	93.4	94.3	89.4	1.5	1.0	3.7
Psychology	47,400	34,300	13,100	45,500	33,300	12,200	96.0	97.1	93.1	1.1	1.0	1.2
Social Sciences	55,100	45,700	9,400	52,000	43,400	8,600	94.4	95.0	91.5	0.8	0.3	3.1

SOURCE: Characteristics of Doctoral Scientists and Engineers in the United States: 1981, National Science Foundation, NSF 82-332

TABLE 4-10

DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, YEARS OF PROFESSIONAL EXPERIENCE AND SEX, 1981

FIELD	SEX	YEARS OF PROFESSIONAL EXPERIENCE																			
		1 or Less		2-4 Years		5-9 Years		10-14 Years		15-19 Years		20-24 Years		25-29 Years		30-34 Years		35-39 Years		40 or More		Total
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.
All Fields	Total	5,226	1.4	28,389	7.8	60,680	16.7	64,101	17.6	43,322	11.9	33,476	9.2	26,422	7.3	21,712	6.0	11,343	3.1	10,585	2.9	363,866
	Women	1,374	3.0	6,460	14.1	12,264	26.8	7,648	16.7	3,947	8.6	2,527	5.5	1,885	4.1	1,354	3.0	854	1.9	850	1.9	45,747
Chemists	Total	755	1.7	3,661	8.1	6,488	14.3	6,937	15.3	5,108	11.3	4,563	10.1	3,931	8.7	2,707	6.0	2,155	4.7	2,437	5.4	45,376
	Women	145	4.0	559	15.3	819	22.4	496	13.6	271	7.4	244	6.7	176	4.8	169	4.6	79	2.2	81	2.2	3,658
Physicists/ Astronomers	Total	348	1.6	1,638	7.3	3,287	14.7	4,371	19.6	2,977	13.3	2,261	10.1	1,620	7.3	1,250	5.6	743	3.3	666	3.0	22,317
	Women	17	2.4	92	13.2	200	28.7	118	17.0	60	8.6	42	6.0	32	4.6	13	1.9	8	1.1	9	1.3	696
Mathematicians	Total	137	1.0	951	6.9	1,729	12.5	2,349	17.0	2,092	15.1	1,313	9.5	992	7.2	667	4.8	369	2.7	416	3.0	13,819
	Women	15	1.3	121	10.4	296	25.4	166	14.2	124	10.6	62	5.3	76	6.5	42	3.6	32	2.7	40	3.4	1,166
Statisticians	Total	25	0.9	169	6.4	572	21.6	406	15.3	361	13.6	278	10.5	218	8.2	118	4.5	102	3.8	110	4.1	2,651
	Women	25	8.4	44	14.8	85	28.6	48	16.2	31	10.4	7	2.4	5	1.7	4	1.3	6	2.0	6	2.0	297
Computer Scientists	Total	98	1.1	670	7.4	2,132	23.5	2,232	24.6	1,114	12.3	462	5.1	439	4.8	378	4.2	100	1.1	52	0.6	9,066
	Women	9	1.3	128	17.9	253	35.4	124	17.4	44	6.2	24	3.4	4	0.6	3	0.4	*	-	2	0.3	714
Environmental Scientists	Total	284	1.7	1,253	7.6	2,889	17.4	2,862	17.3	2,341	14.1	1,677	10.1	996	6.0	1,101	6.6	468	2.8	558	3.4	16,589
	Women	30	3.3	132	14.6	304	33.6	129	14.2	67	7.4	78	8.6	25	2.8	8	0.9	10	1.1	19	2.1	906
Engineers	Total	513	0.9	3,292	5.6	8,023	13.8	10,856	18.6	8,039	13.8	6,946	11.9	4,527	7.8	3,972	6.8	1,895	3.2	1,328	2.3	58,311
	Women	48	6.1	132	16.9	238	30.4	138	17.6	47	6.0	39	5.0	19	2.4	10	1.3	5	0.6	2	0.3	783
Biological Scientists	Total	1,239	2.3	5,483	10.1	10,067	18.5	9,597	17.6	5,429	10.0	4,442	8.2	3,771	6.9	2,892	5.3	1,352	2.5	1,493	2.7	54,442
	Women	424	4.0	1,636	15.4	2,696	25.3	1,656	15.6	859	8.1	584	5.5	426	4.0	336	3.2	205	1.9	203	1.9	10,646
Agricultural Scientists	Total	144	0.8	1,133	6.6	2,570	14.9	2,356	13.6	2,128	12.3	1,777	10.3	1,801	10.4	1,435	8.3	754	4.4	540	3.1	17,270
	Women	19	3.6	124	23.4	135	25.5	103	19.4	43	8.1	14	2.6	12	2.3	14	2.6	10	1.9	6	1.1	530
Medical Scientists	Total	596	2.7	2,395	10.8	3,795	17.1	3,312	15.0	2,321	10.5	2,021	9.1	1,469	6.6	1,088	4.9	670	3.0	489	2.2	22,136
	Women	150	3.7	554	13.7	886	21.9	555	13.7	383	9.5	282	7.0	265	6.6	169	4.2	124	3.1	76	1.9	4,045
Psychologists	Total	446	1.0	4,279	9.4	9,894	21.8	8,086	17.8	4,307	9.5	3,165	7.0	3,289	7.2	2,805	6.2	987	2.2	816	1.8	45,416
	Women	253	2.0	1,739	13.6	3,862	30.1	2,170	16.9	1,058	8.3	689	5.4	524	4.1	359	2.8	249	1.9	197	1.5	12,817
Economists	Total	150	1.0	946	6.6	1,878	13.1	2,786	19.5	1,698	11.9	1,078	7.5	905	6.3	920	6.4	427	3.0	571	4.0	14,294
	Women	18	1.4	146	11.6	262	20.7	310	24.5	134	10.6	92	7.3	24	1.9	41	3.2	23	1.8	45	3.6	1,263
Sociologists/ Anthropologists	Total	154	1.3	704	5.9	2,358	19.8	2,082	17.5	1,511	12.7	964	8.1	632	5.3	659	5.5	362	3.0	344	2.9	11,909
	Women	66	2.0	389	11.9	930	28.4	659	20.2	367	11.2	137	4.2	129	3.9	62	1.9	46	1.4	74	2.3	3,270
Other Social Scientists	Total	337	1.1	1,815	6.0	4,998	16.5	5,870	19.4	3,896	12.9	2,529	8.4	1,832	6.1	1,720	5.7	959	3.2	765	2.5	30,270
	Women	155	3.1	664	13.4	1,298	26.2	976	19.7	459	9.3	233	4.7	168	3.4	124	2.5	57	1.2	90	1.8	4,956

SOURCE: Characteristics of Doctoral Scientists and Engineers in the United States, NSF 82-332
National Science Foundation

TABLE 4-11

LABOR FORCE PARTICIPATION, SCIENCE AND ENGINEERING UTILIZATION AND UNEMPLOYMENT RATES OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, SEX AND RACE, 1981
(Percents)

FIELD	LABOR FORCE PARTICIPATION				S/E UTILIZATION RATES				UNEMPLOYMENT RATES			
	Total	White	Black	Asian	Total	White	Black	Asian	Total	White	Black	Asian
ALL FIELDS												
Total		95.0	95.1	97.4		90.8	84.2	91.9		0.7	1.4	1.0
Men	95.6				91.2				0.5			
Women	91.6	91.4	95.8	93.7	87.6	87.6	83.5	89.0	2.3	2.3	1.4	3.6
PHYSICAL SCIENTISTS												
Total		93.5	99.7	98.9		89.8	82.7	91.7		0.6	4.2	1.3
Men	94.5				90.1				0.7			
Women	88.5	87.3	100.0	99.0	86.3	86.2	100.0	88.3	2.2	2.0	0.0	2.5
MATH SCIENTISTS												
Total		95.0	96.0	98.9		90.1	89.1	87.7		0.5	0.0	2.0
Men	95.7				89.9				0.6			
Women	91.1	90.6	100.0	93.8	90.2	89.7	100.0	92.2	1.4	1.4	0.0	1.2
COMPUTER SPECIALISTS												
Total		99.8	100.0	100.0		99.1	100.0	100.0		0.1	0.0	0.0
Men	100.0				99.1				*			
Women	98.6	98.3	100.0	100.0	98.4	98.4	100.0	100.0	0.4	0.5	0.0	0.0
ENVIRONMENTAL SCIENTISTS												
Total		97.0	100.0	100.0		94.9	95.1	96.9		0.5	0.0	2.4
Men	97.2				95.1				0.5			
Women	96.4	96.2	100.0	100.0	94.4	94.5	100.0	94.0	1.1	0.7	0.0	4.0
ENGINEERS												
Total		97.7	100.0	98.1		93.2	78.9	93.8		0.1	0.0	*
Men	97.8				93.2				0.1			
Women	97.4	97.4	100.0	96.9	96.5	96.2	100.0	96.7	0.5	1.3	0.0	3.3
LIFE SCIENTISTS												
Total		93.4	93.5	95.4		93.8	91.2	93.8		1.2	1.7	0.7
Men	94.1				94.5				0.7			
Women	90.0	89.7	94.8	92.1	90.5	90.4	88.8	89.9	3.3	3.5	2.2	2.5
PSYCHOLOGISTS												
Total		95.8	96.6	98.4		90.8	83.5	89.3		1.1	1.0	3.3
Men	96.8				91.2				1.1			
Women	93.7	93.6	95.9	98.8	88.2	88.6	81.0	81.7	1.2	1.1	1.6	8.0
SOCIAL SCIENTISTS												
Total		94.6	92.1	94.5		82.1	79.3	80.9		0.6	0.7	2.6
Men	95.1				82.3				0.3			
Women	91.6	91.5	95.7	93.2	78.9	78.9	78.4	77.1	3.0	2.9	0.7	9.6

* Less than .05%

SOURCE: Characteristics of Doctoral Scientists and Engineers, 1972-81 Series, National Science Foundation

TABLE 4-12

SEX AND RACE OF EMPLOYED DOCTORAL SCIENTISTS AND ENGINEERS BY EMPLOYMENT SECTOR
1973, 1975, 1977, 1979 and 1981

	1973		1975		1977		1979		1981	
	No.	%	No.	%	No.	%	No.	%	No.	%
ALL EMPLOYMENT SECTORS										
Men	203,452	92.3	233,932	91.4	256,808	90.3	280,393	89.4	302,596	88.1
Women	16,958	7.7	22,113	8.6	27,504	9.7	33,343	10.6	40,942	11.9
White	200,878	91.1	229,760	89.7	253,582	89.2	276,872	88.2	304,398	88.6
Black	2,089	.9	2,516	1.0	2,770	1.0	3,420	1.1	4,320	1.3
American Indian/AK Nat.	390	.2	495	.2	623	.2	926	.3	2,198	0.6
Asian/Pacific Islander	9,144	4.1	12,709	5.0	15,324	5.4	21,031	6.7	26,877	7.8
EDUCATIONAL INSTITUTIONS										
Men	117,248	90.6	133,648	89.6	144,365	88.5	152,072	87.4	161,020	86.2
Women	12,160	9.4	15,536	10.4	18,775	11.5	21,894	12.6	25,789	13.8
White	117,359	90.7	133,927	89.8	146,196	89.6	154,604	88.9	167,147	89.5
Black	1,403	1.1	1,716	1.2	1,804	1.1	2,165	1.2	2,892	1.5
American Indian/AK Nat.	283	.2	309	.2	362	.2	618	.4	1,204	0.6
Asian/Pacific Islander	5,171	4.0	6,706	4.5	7,376	4.5	9,876	5.7	12,030	6.4
BUSINESS AND INDUSTRY										
Men	52,040	97.4	62,486	96.7	68,516	95.9	78,246	94.5	91,800	92.7
Women	1,363	2.6	2,141	3.3	2,959	4.1	4,578	5.5	7,220	7.3
White	48,847	91.5	57,514	89.0	62,603	87.6	70,837	85.5	84,682	85.5
Black	308	.6	364	.6	439	.6	415	.5	613	0.6
American Indian/AK Nat.	65	.1	85	.1	149	.2	184	.2	586	0.6
Asian/Pacific Islander	2,743	5.1	4,400	6.8	5,812	8.1	8,780	10.6	11,763	11.9
FEDERAL GOVERNMENT										
Men	17,229	94.7	17,962	94.6	20,095	94.0	22,302	93.2	23,091	92.0
Women	971	5.3	1,033	5.4	1,273	6.0	1,621	6.8	1,996	8.0
White	16,976	93.3	17,396	91.6	19,434	90.9	21,796	91.1	22,956	91.5
Black	207	1.1	232	1.2	272	1.3	375	1.6	259	1.0
American Indian/AK Nat.	20	.1	26	.1	32	.1	61	.3	176	0.7
Asian/Pacific Islander	478	2.6	636	3.3	801	3.7	981	4.1	1,314	5.2

SOURCE: Characteristics of Doctoral Scientists and Engineers in the United States: 1981, National Science Foundation 82-332

TABLE 4-13

EMPLOYED DOCTORATES BY FIELD, EMPLOYMENT SECTOR AND SEX, 1981

FIELD	Total Employed			Business and Industry			Educational Institutions			Hospitals and Clinics			Non-Profit Organizations			Fed. Govt. & Military/Comm. Corps			State and Other Government		
	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W
TOTAL ALL FIELDS	**343,538**	**40,942**	**11.9**	**99,020**	**7,220**	**7.3**	**186,809**	**25,789**	**13.8**	**9,862**	**2,213**	**22.4**	**12,581**	**2,118**	**16.8**	**27,139**	**2,093**	**7.7**	**6,522**	**1,350**	**20.7**
Physical Scientists	**63,189**	**3,770**	**6.0**	**27,401**	**1,113**	**4.1**	**28,333**	**2,062**	**7.3**	**518**	**74**	**14.3**	**2,071**	**190**	**9.2**	**4,479**	**240**	**5.4**	**358**	**86**	**24.0**
Chemists	41,971	3,160	7.5	22,250	981	4.4	15,772	1,701	10.8	405	70	17.3	1,033	149	14.4	2,196	172	7.8	303	82	27.1
Physicists/Astronomers	21,218	610	2.9	5,151	132	2.6	12,561	361	2.9	113	4	3.5	1,038	41	3.9	2,283	68	3.0	55	4	7.3
Math Scientists	**15,594**	**1,315**	**8.4**	**1,621**	**134**	**8.3**	**12,739**	**1,078**	**8.5**	*	*	-	**263**	**45**	**17.1**	**909**	**54**	**5.9**	**2**	**2**	**100.0**
Mathematicians	13,038	1,039	8.0	1,159	82	7.1	11,007	899	8.2	*	*	-	224	34	15.2	610	22	3.6	2	2	100.0
Statisticians	2,556	276	10.8	462	52	11.3	1,732	179	10.3	*	*	-	39	11	28.2	299	32	10.7	-	-	-
Computer Specialists	**9,048**	**701**	**7.7**	**5,212**	**417**	**8.0**	**3,010**	**252**	**8.4**	**20**	*	-	**276**	**4**	**1.4**	**378**	**12**	**3.2**	**152**	**16**	**10.5**
Environmental Scientists	**16,029**	**863**	**5.4**	**4,788**	**236**	**4.9**	**6,772**	**382**	**5.6**	*	*	-	**623**	**49**	**7.9**	**3,184**	**148**	**4.6**	**616**	**37**	**6.0**
Earth Scientists	12,121	578	4.8	4,213	211	5.0	5,019	215	4.3	*	*	-	309	23	7.4	2,083	99	4.8	196	28	14.3
Oceanographers	1,782	203	11.4	184	9	4.9	964	120	12.4	*	*	-	86	20	23.3	396	41	10.4	137	4	2.9
Atmospheric Scientists	2,126	82	3.9	391	16	4.1	789	47	6.0	*	*	-	228	6	2.6	705	8	1.1	13	5	38.5
Engineers	**56,953**	**759**	**1.3**	**31,659**	**422**	**1.3**	**18,083**	**223**	**1.2**	**18**	**11**	**61.1**	**2,338**	**46**	**2.0**	**4,309**	**49**	**1.1**	**357**	**6**	**1.7**
Life Scientists	**86,715**	**13,244**	**15.3**	**13,473**	**1,301**	**9.7**	**56,787**	**9,521**	**16.8**	**2,974**	**476**	**16.0**	**3,165**	**691**	**21.8**	**8,354**	**882**	**10.6**	**1,643**	**315**	**19.2**
Biological Scientists	49,673	9,032	18.2	5,330	743	13.9	35,840	6,842	19.1	1,181	190	16.1	2,272	537	23.6	4,356	545	12.5	569	139	24.4
Agricultural Scientists	15,879	436	2.7	3,450	105	3.3	9,147	265	2.9	3	*	-	284	7	2.5	2,444	53	2.2	432	6	1.4
Medical Scientists	21,163	3,776	17.8	4,693	453	9.7	11,800	2,414	20.5	1,790	286	16.0	609	147	24.1	1,554	284	18.3	642	160	24.9
Psychologists	**43,064**	**11,860**	**27.5**	**10,145**	**2,996**	**29.5**	**21,833**	**5,998**	**27.5**	**6,194**	**1,558**	**25.2**	**1,693**	**526**	**31.1**	**1,432**	**189**	**13.2**	**1,715**	**579**	**33.8**
Social Scientists	**52,946**	**8,430**	**15.9**	**4,721**	**601**	**12.7**	**39,252**	**6,273**	**16.0**	**138**	**94**	**68.1**	**2,152**	**567**	**26.3**	**4,094**	**519**	**12.7**	**1,679**	**309**	**18.4**
Economists	13,426	1,131	8.4	2,161	176	8.1	9,017	668	7.4	*	*	-	331	108	32.6	1,258	136	10.8	136	13	9.6
Sociologists/Anthrop.	10,998	2,934	26.7	487	84	17.2	9,285	2,459	26.5	96	69	71.9	534	158	29.6	310	82	26.5	221	57	25.8

* No cases reported.

SOURCE: Characteristics of Doctoral Scientists and Engineers, 1981 National Science Foundation NSF 82-332

TABLE 4-14

EMPLOYED DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, RACE AND TYPE OF EMPLOYER, 1981

	Total	Business & Industry	Educational Institutions	Federal Government	Other[1]
All Fields	**343,538**	**99,020**	**186,809**	**25,087**	**32,622**
White	304,398	84,682	167,147	22,956	29,613
Black	4,320	613	2,892	259	556
Asian	26,877	11,763	12,030	1,314	1,770
Other[2]	7,943	1,962	4,740	558	683
Physical Scientists	**63,189**	**27,401**	**28,333**	**4,343**	**3,112**
White	55,519	23,939	25,100	3,766	2,714
Black	615	208	347	35	25
Asian	5,700	2,847	2,101	438	314
Other	1,355	407	785	104	59
Mathematical Scientists	**15,594**	**1,621**	**12,739**	**852**	**382**
White	13,690	1,482	11,150	737	321
Black	192	6	147	9	30
Asian	1,183	118	998	39	28
Other	529	15	444	67	3
Computer Specialists	**9,048**	**5,212**	**3,010**	**355**	**471**
White	7,924	4,461	2,725	285	453
Black	20	14	3	3	*
Asian	886	603	250	28	5
Other	218	134	32	39	13
Environmental Scientists	**16,029**	**4,788**	**6,772**	**3,069**	**1,400**
White	15,008	4,479	6,327	2,940	1,262
Black	41	8	17	14	2
Asian	731	247	310	61	113
Other	249	54	118	54	23
Engineers	**56,953**	**31,659**	**18,083**	**3,805**	**3,406**
White	46,552	24,498	15,707	3,384	2,963
Black	270	118	92	16	44
Asian	8,883	6,421	1,769	331	362
Other	1,248	622	515	74	37
Life Scientists	**86,715**	**13,473**	**56,787**	**7,590**	**8,865**
White	77,856	12,031	50,844	7,088	7,893
Black	1,089	65	783	105	136
Asian	6,077	1,094	4,070	284	629
Other	1,693	283	1,090	113	207
Psychologists	**43,064**	**10,145**	**21,833**	**1,211**	**9,875**
White	40,422	9,621	20,342	1,122	9,337
Black	816	112	523	26	155
Asian	579	88	334	32	125
Other	1,247	324	634	31	258
Social Scientists	**52,946**	**4,721**	**39,252**	**3,862**	**5,111**
White	47,427	4,171	34,952	3,634	4,670
Black	1,277	82	980	51	164
Asian	2,838	345	2,198	101	194
Other	1,404	123	1,122	76	83

[1] Includes hospitals and clinics; nonprofit organizations; military; State government; other governments; and "No report."

[2] Includes American Indians and "No report."

* Too few cases to estimate.

SOURCE: Characteristics of Doctoral Scientists and Engineers, 1981, National Science Foundation, NSF 82-332

TABLE 4-15

MINORITY DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, RACE AND EMPLOYMENT SECTOR, 1981

	BUSINESS & INDUSTRY			EDUCATIONAL INST.			GOVERNMENT**			OTHER			TOTAL		
FIELD	Black	Indian	Asian	Black	Indian	Asian	Bl.	Ind.	Asian	Bl.	Ind.	Asian	Black	Indian	Asian
ALL FIELDS	**613**	**586**	**11,763**	**2,892**	**1,204**	**12,030**	**349**	**216**	**1,634**	**424**	**197**	**1,411**	**4,609**	**2,325**	**27,857**
Physical Scientists	**208**	**65**	**2,847**	**347**	**173**	**2,101**	**35**	**45**	**495**	**24**	**13**	**254**	**644**	**296**	**5,838**
Chemists	126	63	2,328	204	112	968	29	26	304	15	0	174	380	201	3,898
Phys/Astron.	82	2	519	143	61	1,133	6	19	147	9	13	80	264	95	1,940
Math Scientists	**6**	*	**118**	**147**	**55**	**998**	**9**	**17**	**39**	**30**	**2**	**28**	**200**	**74**	**1,221**
Mathematicians	6	*	59	140	37	812	7	15	7	16	2	28	177	54	937
Statisticians	*	*	59	7	18	186	2	2	32	14	*	*	23	20	284
Computer Specialists	**14**	**5**	**603**	**3**	**9**	**250**	**3**	**3**	**28**	**0**	**0**	**5**	**20**	**17**	**886**
Engineers	**118**	**230**	**6,421**	**92**	**119**	**1,769**	**16**	**15**	**423**	**15**	**29**	**270**	**270**	**437**	**9,055**
Environmental Sci.	**8**	**7**	**247**	**17**	**14**	**310**	**14**	**35**	**69**	**2**	*	**105**	**41**	**56**	**749**
Earth Scientists	8	7	169	13	7	209	9	33	51	2	*	88	32	47	535
Oceanographers	*	*	25	2	7	55	5	*	5	*	*	17	7	7	102
Atmospheric Sci.	*	*	53	2	*	46	*	2	13	*	*	*	2	2	112
Life Scientists	**65**	**119**	**1,094**	**783**	**318**	**4,070**	**120**	**44**	**337**	**114**	**38**	**540**	**1,185**	**551**	**6,416**
Biological Sci.	32	70	592	429	187	2,715	79	19	246	64	28	271	663	335	4,025
Agricultural Sci.	8	15	205	134	65	451	10	23	26	15	10	*	209	113	771
Medical Sci.	25	34	297	220	66	904	31	2	65	35	*	269	313	103	1,620
Psychologists	**112**	**154**	**88**	**523**	**179**	**334**	**49**	**37**	**79**	**132**	**105**	**78**	**853**	**475**	**609**
Social Scientists	**82**	**6**	**345**	**980**	**337**	**2,198**	**103**	**8**	**164**	**107**	**10**	**131**	**1,396**	**419**	**3,083**
Economists	39	*	229	145	219	698	10	*	81	10	5	92	234	242	1,165
Sociol/Anthrop.	7	1	11	246	64	319	2	*	19	50	*	*	343	65	427
Other Social Sci.	36	5	105	589	54	1,181	91	8	64	47	5	39	819	112	1,491

* No reported cases. ** Includes Federal, State and Local Government.

SOURCE: SMC estimates for 1958-71 based on data by Adolph Wilburn. Current estimates by SMC based on Degree Data from the National Research Council

TABLE 4-16

ESTIMATED PROPORTIONS OF BLACKS AMONG U.S. DOCTORATES AWARDED 1958-81

FIELD	Total	% of Total	Blacks	% of Blacks	Blacks as % of Total
Physical Sci. & Mathematics	91,849	17.2	852	6.5	0.9
Engineering	47,382	8.9	233	1.8	0.5
Life Sciences	82,188	15.4	1,184	9.0	1.4
Social Sciences	103,730	19.4	2,331	17.7	2.2
Arts & Humanities	75,978	14.2	1,227	9.3	1.6
Education	111,087	20.8	6,764	51.4	6.1
Professional Fields	22,896	4.3	571	4.3	2.5
TOTAL, ALL FIELDS	535,110	100.0	13,162	100.0	2.0

Note: In years after 1971, only U.S. Citizens and Permanent Visa residents have been counted. Earlier years include total doctorates awarded.

SOURCE: Characteristics of Doctoral Scientists and Engineers in the United States: 1981, National Science Foundation, NSF 82-332

TABLE 4-17

EMPLOYED DOCTORATES BY FIELD, WORK ACTIVITY AND SEX, 1981

FIELD	Total Employed			Research & Development			Management or Administration			Teaching			Consulting			Sales/Professional Services			Other		
	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W
TOTAL ALL FIELDS	343,538	40,942	11.9	120,108	12,290	10.2	60,312	5,001	8.3	104,956	13,919	13.3	12,035	1,072	8.9	25,724	5,817	22.6	16,441	2,253	13.7
Physical Scientists	63,189	3,770	6.0	29,681	1,764	5.9	11,892	465	3.9	15,609	1,149	7.4	1,128	16	1.4	1,446	88	6.1	2,865	231	8.1
Chemists	41,971	3,160	7.5	18,548	1,414	7.6	8,985	408	4.5	9,661	1,006	10.4	876	9	1.0	1,181	76	6.4	2,329	198	8.5
Physicists/Astron.	21,218	610	2.9	11,133	350	3.1	2,907	57	2.0	5,948	143	2.4	252	7	2.8	265	12	4.5	536	33	6.2
Math Scientists	15,594	1,315	8.4	3,390	227	6.7	1,316	69	5.2	9,602	905	9.4	458	58	12.7	301	14	4.7	383	29	7.6
Mathematicians	13,038	1,039	8.0	2,731	158	5.8	1,147	55	4.8	8,277	753	9.1	161	31	19.3	223	7	3.1	378	24	6.3
Statisticians	2,556	276	10.8	659	69	10.5	169	14	8.3	1,325	152	11.5	297	27	9.1	78	7	9.0	5	5	100.0
Computer Specialists	9,048	701	7.7	4,512	372	8.2	1,693	52	3.1	1,546	131	8.5	554	42	7.6	217	30	13.8	424	70	16.5
Environmental Sci.	16,029	863	5.4	6,321	373	5.9	3,624	146	4.0	3,617	171	4.7	1,045	55	5.3	395	16	4.1	882	94	10.7
Earth Scientists	12,121	578	4.8	4,076	177	4.3	2,719	100	3.7	3,101	146	4.7	927	48	6.2	373	15	4.0	805	87	10.8
Oceanographers	1,782	203	11.4	1,028	136	13.2	445	35	7.9	182	18	9.9	53	7	13.2	20	1	5.0	36	3	8.3
Atmospheric Sci.	2,126	82	3.9	1,217	60	4.9	460	11	2.4	334	7	2.1	65	*	-	2	*	-	41	4	9.8
Engineers	56,953	759	1.3	23,380	379	1.6	15,193	103	0.7	10,744	115	1.1	3,818	62	1.6	1,366	16	1.2	2,282	83	3.6
Life Scientists	86,715	13,244	15.3	39,888	6,576	16.5	12,457	1,347	10.8	21,990	3,618	16.5	1,623	170	10.5	5,297	652	12.3	4,225	720	17.0
Biological Sci.	49,673	9,032	18.2	25,647	4,940	19.3	5,036	630	12.5	15,217	2,713	17.8	751	104	13.8	948	188	19.8	1,450	343	23.7
Agricultural Sci.	15,879	436	2.7	6,732	198	2.9	3,348	35	1.0	2,997	92	3.1	407	10	2.5	715	3	0.4	1,342	91	6.8
Medical Scientists	21,163	3,776	17.8	7,509	1,438	19.2	4,073	682	16.7	3,776	813	21.5	465	56	12.0	3,634	461	12.7	1,433	286	20.0
Psychologists	43,064	11,860	27.5	5,383	1,202	22.3	5,853	1,500	25.6	12,563	3,265	26.0	2,051	473	23.1	15,168	4,732	31.2	1,512	522	34.5
Social Scientists	52,946	8,430	15.9	7,553	1,397	18.5	8,284	1,319	15.9	29,285	4,565	15.6	1,358	196	14.4	1,534	269	17.5	3,868	504	13.0
Economists	13,426	1,131	8.4	2,972	291	9.8	1,815	143	7.9	6,769	498	7.4	815	62	7.6	283	8	2.8	787	74	9.4
Sociol./Anthrop.	10,998	2,934	26.7	1,821	599	32.9	1,288	244	18.9	6,859	1,812	26.4	18	14	77.8	255	103	40.1	480	106	22.1
Other Social Sci.	28,522	8,430	29.6	2,760	507	18.4	5,181	932	18.0	15,657	2,255	14.4	725	120	16.6	996	158	15.9	2,601	324	12.5

* No cases reported.

SOURCE: Employment of Minority Ph.D.'s: Changes Over Time by Betty D. Maxfield, National Academy of Sciences, 1981

TABLE 4-18

PERCENTAGE OF NONACADEMICALLY EMPLOYED SCIENCE, ENGINEERING, AND HUMANITIES PH.D.'S BY SEX AND RACIAL/ETHNIC CATEGORY, 1979

	Grand Total	Whites		Minorities								
				U.S.-Born					Foreign-Born			
		U.S. Born	Frgn Born	Total	Hisp	Black	Asian	Am In	Total	Hisp	Black	Asian
Science/Engineering												
Total Employed	295,731	231,029	27,044	6,313	1,423	2,531	1,581	778	19,516	848	638	18,007
% Outside Academe	45.9	45.8	42.5	38.9	36.1	40.8	40.5	34.3	56.1	59.4	29.9	57.0
Men Employed	265,942	207,901	24,455	5,238	1,264	1,889	1,406	679	17,787	717	579	16,468
% Outside Academe	46.9	46.8	43.5	39.8	37.7	41.1	42.3	34.9	57.5	61.9	29.5	58.3
Women Employed	29,789	23,128	2,589	1,075	159	642	175	99	1,729	131	59	1,539
% Outside Academe	37.6	37.6	33.5	34.3	23.9	39.7	26.3	30.3	42.5	45.8	33.9	42.6
Humanities												
Total Employed	62,896	48,068	4,882	2,103	920	795	127	261	1,263	632	97	522
% Outside Academe	15.0	15.6	11.5	16.1	14.0	13.5	18.1	30.7	8.3	6.5	4.1	11.3
Men Employed	47,800	36,756	3,299	1,518	637	579	67	235	896	441	76	379
% Outside Academe	14.7	15.2	10.9	15.5	9.6	13.5	26.9	33.6	7.5	4.5	5.3	11.3
Women Employed	15,096	11,312	1,583	585	283	216	60	26	367	191	21	143
% Outside Academe	16.1	16.8	12.8	17.6	24.0	13.4	8.3	3.8	10.4	11.0	0.0	11.2

Source: 1979 Survey of Doctorate Recipients.

TABLE 4-19

PERCENTAGE OF NONACADEMICALLY EMPLOYED 1960-1978 SCIENCE, ENGINEERING, AND HUMANITIES PH.D.'S BY YEAR OF PH.D. AND RACIAL/ETHNIC CATEGORY

	Grand Total	Whites		Minorities								
				U.S.-Born					Foreign-Born			
		U.S. Born	Frgn Born	Total	Hisp	Black	Asian	Am In	Total	Hisp	Black	Asian
Science/Engineering												
Employed 1960-69 Ph.D.s	95,264	73,396	10,026	1,733	391	412	656	274	5,866	129	75	5,662
% Outside Academe	41.8	42.1	40.1	32.4	32.5	39.3	35.7	14.2	46.1	25.6	9.3	47.1
Employed 1970-78 Ph.D.s	138,831	110,168	8,760	3,679	897	1,706	641	435	12,370	638	556	11,153
% Outside Academe	49.3	48.4	44.8	41.6	36.9	41.3	49.1	41.1	62.9	62.5	33.1	64.5
Humanities												
Employed 1960-69 Ph.D.s	18,425	13,493	1,606	491	214	171	51	55	290	142	*	145
% Outside Academe	8.8	8.6	6.0	11.0	4.2	4.7	35.3	34.5	6.6	0.0	*	13.1
Employed 1970-78 Ph.D.s	34,288	27,649	2,556	1,334	603	506	67	158	869	434	94	329
% Outside Academe	19.0	20.1	16.9	17.6	18.4	14.4	7.5	29.1	7.8	8.8	4.3	7.6

*Population estimates based on less than 3 respondents have not been reported.

Source: 1979 Survey of Doctorate Recipients.

SOURCE: Employment of Minority Ph.D.'s: Changes Over Time by Betty D. Maxfield, National Academy of Sciences, 1981

TABLE 4-20

PRIMARY WORK ACTIVITY OF NON-ACADEMICALLY EMPLOYED Ph.D.s BY RACIAL/ETHNIC CATEGORY, 1979

	Grand Total	Whites		Minorities								
				U.S.-Born					Foreign-Born			
		U.S. Born	Frgn Born	Total	Hisp	Black	Asian	Am In	Total	Hisp	Black	Asian
Science/Engineering												
Total Nonacademically Empl	135,810	105,899	11,495	2,454	514	1,032	641	267	10,955	504	191	10,260
Percentage in:												
Teaching	1.0	1.1	0.6	1.6	0.6	2.4	1.7	0.0	0.5	5.6	0.0	0.3
Research/Dvlp/Design	37.6	36.8	37.9	33.3	28.6	28.2	39.0	47.9	48.0	56.7	70.7	47.1
Management/Admin	33.5	33.9	31.6	37.4	36.6	42.1	37.0	22.1	34.6	19.8	20.4	35.6
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Consulting/Prof. Svcs	16.0	16.5	15.7	15.8	18.9	15.7	12.0	19.1	10.0	12.1	7.3	9.9
Writing/Editing	2.2	2.2	1.9	2.4	0.4	4.7	0.5	1.9	0.8	0.0	0.0	0.8
Mktg/Prod/Insp	4.9	4.8	6.4	4.8	3.7	2.4	8.0	9.0	4.0	2.6	0.5	4.1
Other	3.4	3.5	3.4	2.9	6.6	2.4	1.7	0.0	1.6	1.0	0.0	1.7
No Report	1.3	1.1	2.4	1.9	4.7	2.1	0.2	0.0	0.6	2.2	1.0	0.6
Humanities												
Total Nonacademically Empl	9,447	7,487	563	339	129	107	23	80	105	41	*	59
Percentage in:												
Teaching	14.7	14.7	22.9	12.1	1.6	20.6	0.0	21.3	33.3	36.6	*	33.9
Research/Dvlp/Design	5.7	6.4	5.3	2.7	7.0	0.0	0.0	0.0	1.0	0.0	*	0.0
Management/Admin	22.1	20.7	15.6	38.3	21.7	36.4	30.4	70.0	25.7	51.2	*	10.2
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Consulting/Prof. Svcs	12.3	12.5	13.9	4.4	10.1	1.9	0.0	0.0	20.0	0.0	*	35.6
Writing/Editing	17.0	17.5	15.3	19.5	41.1	4.7	8.7	7.5	6.7	0.0	*	11.9
Mktg/Prod/Insp	8.5	7.7	14.7	9.1	18.6	3.7	13.0	0.0	1.9	0.0	*	3.4
Other	14.6	15.8	8.7	13.9	0.0	32.7	47.8	1.3	5.7	12.2	*	1.7
No Report	5.1	4.7	3.6	0.0	0.0	0.0	0.0	0.0	5.7	0.0	*	3.4

*Population estimates based on less than 3 respondents have not been reported.

Source: 1979 Survey of Doctorate Recipients.

SOURCE: Employment of Minority Ph.D.'s: Changes Over Time by Betty D. Maxfield, National Academy of Sciences, 1981

TABLE 4-21

EMPLOYMENT SECTOR OF NON-ACADEMICALLY EMPLOYED DOCTORATES BY RACIAL/ETHNIC CATEGORY

Employment Sector	Grand Total	Whites		Minorities								
		U.S. Born	Frgn Born	U.S.-Born					Foreign-Born			
				Total	Hisp	Black	Asian	Am In	Total	Hisp	Black	Asian
Science/Engineering												
Total Nonacademically Empl	135,810	105,899	11,495	2,454	514	1,032	641	267	10,955	504	191	10,260
Percentage in:												
Elem./Sec. Schools	1.5	1.6	1.0	2.4	1.6	4.5	0.6	0.0	0.4	0.0	0.0	0.4
Business/Industry	60.0	57.6	68.5	47.2	46.1	30.3	71.5	56.2	78.4	51.0	49.2	80.2
U.S. Government	18.6	20.1	13.6	21.8	12.3	33.4	9.4	25.5	9.6	23.4	20.9	8.7
State/Local Govt	4.2	4.6	1.5	5.7	5.3	6.7	4.1	7.1	2.5	4.8	0.5	2.5
Hosp./Clinic	6.6	7.0	5.6	9.7	5.1	14.1	9.7	1.9	2.7	7.7	1.6	2.5
Non-Profit Organ.	7.1	7.3	6.9	12.2	29.2	9.0	4.8	9.4	3.4	3.0	7.3	3.4
Other	2.0	1.8	3.0	1.0	0.6	2.0	0.0	0.0	3.0	10.1	20.4	2.3
Humanities												
Total Nonacademically Empl	9,447	7,487	563	339	129	107	23	80	105	41	*	59
Percentage in:												
Elem./Sec. Schools	16.8	17.0	29.1	19.5	7.0	39.3	0.0	18.8	30.5	34.1	*	30.5
Business/Industry	37.0	37.6	35.7	43.4	53.5	6.5	60.9	71.3	33.3	48.8	*	18.6
U.S. Government	11.1	11.0	3.0	13.0	8.5	22.4	39.1	0.0	1.9	0.0	*	1.7
State/Local Govt	6.0	6.3	2.7	2.9	4.7	3.7	0.0	0.0	1.9	4.9	*	0.0
Hosp./Clinic	0.6	0.3	0.0	0.6	0.0	0.0	0.0	2.5	15.2	2.4	*	25.4
Non-Profit Organ.	20.4	19.6	22.7	12.4	19.4	15.9	0.0	0.0	13.3	4.9	*	20.3
Other	8.1	8.3	6.7	8.3	7.0	12.1	0.0	7.5	3.8	4.9	*	3.4

*Population estimates based on less than 3 respondents have not been reported.

Source: 1979 Survey of Doctorate Recipients.

SOURCE: Science, Engineering and Humanities Doctorates in the United States, Profile 1981, National Research Council, 1982

TABLE 4-22

SEX AND RACE OF U.S. DOCTORATES IN 1981, BY FIELD, HUMANITIES AND SELECTED SOCIAL SCIENCES*

		Field of Doctorate								
Demographic Characteristics	All Fields	Hist	Art Hist	Music	Speech/ Theater	Phil	Other Humn	Eng/ Amer Lang & Lit	Class Lang & Lit	Modern Lang & Lit
Total Population (N)	76,000	20,300	2,000	5,100	3,300	6,100	2,000	21,300	1,800	14,100
	%	%	%	%	%	%	%	%	%	%
Sex										
Male	72.8	83.7	53.7	80.6	77.6	85.8	66.1	67.4	69.7	60.0
Female	27.2	16.3	46.3	19.4	22.4	14.2	33.9	32.6	30.3	40.0
Racial/Ethnic Group										
White	92.1	92.8	93.8	93.9	91.2	91.9	85.0	95.3	94.7	86.3
Minority Group	5.9	4.7	4.3	5.5	4.5	5.2	11.9	3.2	1.9	12.2
Hispanic	2.8	1.4	0.9	1.0	0.6	2.0	2.5	1.1	0.7	9.3
Black	1.5	1.9	0.7	3.0	2.2	0.8	2.6	1.1	1.0	1.2
Asian	1.1	0.9	2.0	0.8	0.8	2.0	5.8	0.5	0.1	1.3
American Indian	0.5	0.4	0.8	0.6	0.9	0.4	1.0	0.5	0.1	0.5
No Report	2.1	2.5	1.9	0.6	4.3	2.9	3.2	1.5	3.4	1.5

* Includes archeology, linguistics, area studies, political science

TABLE 4-23

EMPLOYMENT AND UNEMPLOYMENT OF HUMANITIES PH.D.'S IN THE U.S. LABOR FORCE BY SEX AND FIELD OF DOCTORATE, 1981

		Field of Doctorate								
1981 Labor Force Status/Sex	All Fields	Hist	Art Hist	Music	Speech/ Theater	Phil	Other Humn	Eng/ Amer Lang & Lit	Class Lang & Lit	Modern Lang & Lit
TOTAL Ph.D. Labor Force*	69,700	18,700	1,900	4,800	3,000	5,700	1,900	19,300	1,600	12,800
Employed Full-Time	91.2	92.0	85.2	88.2	92.5	92.0	91.2	92.2	89.8	89.9
Employed Part-Time	6.5	6.0	8.3	9.3	5.5	6.5	4.6	6.1	7.4	7.1
Seeking Full-Time Employment	2.2	2.2	2.7	3.1	1.6	2.6	2.1	1.5	2.6	2.8
Not Seeking F-T Empl./No Rept.	4.3	3.7	5.6	6.2	3.9	3.8	2.5	4.6	4.8	4.3
Postdoctoral Appointment	0.8	0.8	2.4	0.3	1.2	0.9	0.7	0.5	0.9	0.9
Unemployed and Seeking Employ	1.5	1.2	4.2	2.2	0.8	0.6	3.4	1.2	1.9	2.1
Ph.D. Labor Force,* Male	51,200	15,900	1,000	3,900	2,400	4,900	1,300	13,000	1,100	7,700
Employed Full-Time	94.3	94.1	95.1	90.9	95.3	93.5	91.8	95.7	94.7	94.3
Employed Part-Time	4.0	4.5	2.7	7.2	3.0	5.6	3.0	2.9	2.9	3.2
Seeking Full-Time Employment	1.4	1.5	1.0	2.6	0.3	2.3	2.2	0.5	1.6	1.3
Not Seeking F-T Empl./No Rept.	2.6	2.9	1.7	4.6	2.2	3.3	0.8	2.4	1.3	1.9
Postdoctoral Appointment	0.6	0.6	1.6	0.2	1.3	0.6	1.1	0.2	0.6	1.0
Unemployed and Seeking Employ	1.1	0.9	0.6	1.8	0.4	0.3	4.1	1.2	1.8	1.5
Ph.D. Labor Force,* Female	18,500	2,800	900	900	600	800	600	6,300	500	5,100
Employed Full-Time	82.7	80.5	73.4	76.9	81.3	83.4	90.1	85.0	77.2	83.2
Employed Part-Time	13.5	14.4	14.9	18.4	15.6	11.6	7.8	12.7	18.8	13.1
Seeking Full-Time Employment	4.6	6.2	4.7	5.0	5.0	4.8	2.1	3.6	5.1	5.2
Not Seeking F-T Empl./No Rept.	8.8	8.2	10.2	13.4	10.6	6.9	5.7	9.1	13.7	7.9
Postdoctoral Appointment	1.3	2.3	3.3	0.9	0.5	2.2	0.0	1.0	1.8	0.8
Unemployed and Seeking Employ	2.6	2.7	8.4	3.8	2.6	2.8	2.1	1.4	2.2	2.9

*Includes full-time and part-time employed, postdoctoral appointees, and those unemployed and seeking employment.

SOURCE: Employment of Minority Ph.D.'s: Changes Over Time by Betty D. Maxfield, National Academy of Sciences, 1981

TABLE 4-24

HUMANITIES Ph.D.'S IN THE UNITED STATES , WITH PERCENTAGES, BY PH.D. FIELD AND RACIAL/ETHNIC CATEGORY, 1979

Field of Ph.D.		Grand Total	White		Minorities								
			U.S. Born	Frgn Born	U.S.-Born					Foreign-Born			
					Total	Hisp	Black	Asian	Am In	Total	Hisp	Black	Asian
All Fields	N	71,174	54,185	5,676	2,233	941	875	147	270	1,395	694	114	575
	%	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
History	N	18,309	14,686	942	495	185	246	13	51	169	22	52	95
	%	25.7	27.1	16.6	22.2	19.7	28.1	8.8	18.9	12.1	3.2	45.6	16.5
Art History	N	1,744	1,369	147	22	1	5	6	10	31	10	0	21
	%	2.5	2.5	2.6	1.0	0.1	0.6	4.1	3.7	2.2	1.4	0.0	3.7
Music	N	4,411	3,704	133	195	16	121	18	40	44	9	6	29
	%	6.2	6.8	2.3	8.7	1.7	13.8	12.2	14.8	3.2	1.3	5.3	5.0
Speech/Theater	N	4,081	3,198	121	133	2	89	4	38	11	0	1	10
	%	5.7	5.9	2.1	6.0	0.2	10.2	2.7	14.1	0.8	0.0	0.9	1.7
Philosoj	N	5,784	4,398	381	129	8	43	27	51	164	39	21	104
	%	8.1	8.1	6.7	5.8	0.9	4.9	18.4	18.9	11.8	5.6	18.4	18.1
Other Humanities	N	2,286	1,485	295	134	43	78	3	10	119	23	0	96
	%	3.2	2.7	5.2	6.0	4.6	8.9	2.0	3.7	8.5	3.3	0.0	16.7
Engl/Amer. Lang&Lit	N	19,903	16,654	777	487	274	169	31	13	95	5	19	60
	%	28.0	30.7	13.7	21.8	29.1	19.3	21.1	4.8	6.8	0.7	16.7	10.4
Classical Lang&Lit	N	1,800	1,303	209	46	8	17	11	10	7	0	0	7
	%	2.5	2.4	3.7	2.1	0.9	1.9	7.5	3.7	0.5	0.0	0.0	1.2
Modern Lang&Lit	N	12,856	7,388	2,671	592	404	107	34	47	755	586	15	153
	%	18.1	13.6	47.1	26.5	42.9	12.2	23.1	17.4	54.1	84.4	13.2	26.6

Source: 1979 Survey of Doctorate Recipients.

SOURCE: U.S. Scientists and Engineers 1980, National Science Foundation, NSF 82-314

TABLE 4-25

U.S. SCIENTISTS AND ENGINEERS BY FIELD, SEX AND RACE, 1980

FIELD	SEX	TOTAL No. In 1980	TOTAL % Women	WHITE No In 1980	WHITE % White	BLACK No In 1980	BLACK % Black	ASIAN No. In 1980	ASIAN % Asian	OTHER No. In 1980	OTHER % Other
ALL FIELDS	**Total**	**3,110,700**		**2,959,700**	**95.15**	**59,500**	**1.91**	**81,000**	**2.60**	**10,500**	**0.34**
	Women	**408,100**	**13.12**	**374,300**	**91.72**	**18,700**	**4.58**	**14,200**	**3.48**	**900**	**0.22**
PHYSICAL SCIENTISTS	**Total**	**261,900**		**246,400**	**94.08**	**5,600**	**2.14**	**9,500**	**3.63**	**400**	**0.15**
	Women	**35,900**	**13.71**	**32,600**	**90.81**	**1,100**	**3.06**	**2,200**	**6.13**	*	-
Chemists	Total	170,900		160,400	93.86	4,700	2.75	5,500	3.22	200	0.18
	Women	29,300	17.14	26,400	90.10	900	3.07	2,000	6.83	*	-
Physicists/ Astronomers	Total	67,700		64,000	94.53	600	0.89	3,000	4.43	100	0.15
	Women	3,400	5.02	3,000	88.24	200	5.88	200	5.88	*	-
Other Physical Scientists	Total	23,400		22,000	94.02	400	1.71	1,000	4.27	100	0.43
	Women	3,300	14.10	3,200	96.97	*	-	100	3.03	*	-
MATHEMATICAL SCIENTISTS	**Total**	**127,000**		**117,800**	**92.76**	**5,000**	**3.94**	**3,800**	**2.99**	**500**	**0.39**
	Women	**25,800**	**20.31**	**23,100**	**89.53**	**2,100**	**8.14**	**600**	**2.33**	*	-
Mathema-ticians	Total	90,600		84,500	93.27	4,100	4.53	1,800	1.99	100	0.11
	Women	16,100	17.77	14,400	89.44	1,400	8.70	200	1.24	*	-
Statis-ticians	Total	36,400		33,300	91.48	900	2.47	2,000	5.49	400	1.10
	Women	9,700	26.65	8,700	89.69	600	6.19	400	4.12	*	-
Computer Specialists	Total	354,900		333,200	93.89	7,600	2.14	13,100	3.69	900	0.25
	Women	94,800	26.71	85,800	90.51	3,500	3.69	5,000	5.27	400	0.42
ENVIRONMENTAL SCIENTISTS	**Total**	**102,600**		**100,500**	**97.95**	**600**	**0.58**	**1,100**	**1.07**	**500**	**0.49**
	Women	**12,500**	**12.18**	**11,800**	**94.40**	**200**	**1.60**	**400**	**3.20**	*	-
Earth Scientists	Total	80,100		78,500	98.0	400	0.50	800	1.00	500	0.62
	Women	10,300	12.86	9,800	95.15	200	1.94	400	3.88	*	-
Oceano-graphers	Total	3,200		3,000	93.75	*	-	200	6.25	*	-
	Women	200	6.25	200	100.00	*	-	*	-	*	-
Atmospheric Scientists	Total	19,300		19,000	98.45	100	0.52	100	0.52	*	-
	Women	1,900	9.84	1,800	94.74	*	-	*	-	*	-
LIFE SCIENTISTS	**Total**	**404,700**		**385,500**	**95.26**	**7,500**	**1.85**	**9,900**	**2.45**	**1,800**	**0.44**
	Women	**90,400**	**22.34**	**84,000**	**92.92**	**2,700**	**2.99**	**3,400**	**3.76**	**300**	**0.33**
Biological Scientists	Total	205,800		192,800	93.68	5,200	2.53	6,800	3.30	1,100	0.53
	Women	65,200	31.68	60,200	92.33	2,000	3.07	2,700	4.14	300	0.46
Agricultural Scientists	Total	154,000		150,400	97.66	1,600	1.04	1,500	0.97	500	0.32
	Women	14,400	9.35	14,100	97.92	100	0.69	100	0.69	*	-
Medical Scientists	Total	44,900		42,300	94.21	700	1.56	1,700	3.79	200	0.45
	Women	10,800	24.05	9,700	89.81	600	5.56	500	4.63	*	-
PSYCHOLO-LOGISTS	**Total**	**132,600**		**128,100**	**96.81**	**3,600**	**2.71**	**600**	**0.45**	**300**	**0.23**
	Women	**52,700**	**39.74**	**49,600**	**94.12**	**2,500**	**4.74**	**400**	**0.76**	**200**	**0.38**
SOCIAL SCIENTISTS	**Total**	**229,700**		**215,300**	**93.73**	**10,600**	**4.61**	**2,900**	**1.26**	**900**	**0.39**
	Women	**61,400**	**26.73**	**55,900**	**91.04**	**5,000**	**8.14**	**400**	**0.65**	*	-
Economists	Total	76,400		73,800	96.60	900	1.18	1,600	2.09	200	0.26
	Women	12,700	16.62	12,300	96.85	300	2.36	100	0.79	*	-
Sociologists/ Anthropologists	Total	59,800		53,500	89.46	4,800	8.03	800	1.34	700	1.17
	Women	23,800	39.80	21,400	89.92	2,200	9.24	200	0.84	*	-
Other Social Scientists	Total	93,500		88,100	94.22	5,000	5.35	500	0.53	*	-
	Women	24,900	26.63	22,200	89.16	2,500	10.04	100	0.40	*	-

* Too few cases to report. NOTE: Detail may not add due to rounding.

SOURCE: U.S. Scientists and Engineers, 1980, National Science Foundation, NSF 82-314

TABLE 4-26

SCIENTISTS AND ENGINEERS BY FIELD, HIGHEST DEGREE, SEX AND RACE, 1980

FIELD AND HIGHEST DEGREE			RACE			
	Total	Women	White	Black	Asian	Other
ALL FIELDS	**3,110,700**	**408,100**	**2,959,700**	**59,500**	**81,000**	**10,500**
Doctorate	348,400	39,800	329,100	3,300	14,000	2,000
Master's	763,600	112,400	716,400	15,200	29,900	2,100
Bachelor's	194,600	255,200	1,863,600	40,700	36,200	6,100
CHEMISTS	**170,900**	**29,300**	**160,400**	**4,700**	**5,500**	**200**
Doctorate	43,700	3,100	40,400	200	3,100	*
Master's	20,400	5,400	19,200	600	600	*
Bachelor's	106,500	20,800	100,600	3,800	1,900	200
PHYSICISTS/ASTRONOMERS	**67,700**	**3,400**	**64,000**	**600**	**3,000**	**100**
Doctorate	21,800	700	20,000	100	1,700	*
Master's	19,400	800	18,300	200	800	*
Bachelor's	26,500	1,900	25,700	300	500	*
OTHER PHYSICAL SCIENTISTS	**23,400**	**3,300**	**22,000**	**400**	**1,000**	**100**
Doctorate	*	*	*	*	*	*
Master's	6,500	500	5,900	200	400	*
Bachelor's	16,800	2,800	16,100	200	500	*
MATHEMATICIANS	**90,600**	**16,100**	**84,500**	**4,100**	**1,800**	**100**
Doctorate	13,600	1,100	13,000	300	300	*
Master's	43,000	8,300	39,700	2,100	1,200	*
Bachelor's	33,500	6,700	31,300	1,700	300	100
STATISTICIANS	**36,400**	**9,700**	**33,300**	**900**	**2,000**	**400**
Doctorate	2,900	200	2,400	*	400	*
Master's	16,800	3,500	15,100	300	1,100	300
Bachelor's	16,600	6,000	15,600	600	400	*
COMPUTER SPECIALISTS	**354,900**	**94,800**	**333,200**	**7,600**	**13,100**	**900**
Doctorate	7,300	400	6,600	*	700	100
Master's	90,000	16,900	84,100	1,300	4,600	*
Bachelor's	257,500	77,400	242,400	6,400	7,900	800
ENVIRONMENTAL SCIENTISTS	**102,600**	**12,500**	**100,500**	**600**	**1,100**	**500**
Doctorate	15,700	600	15,200	*	300	200
Master's	27,100	3,800	26,700	100	400	*
Bachelor's	59,800	8,100	58,500	500	400	300
ENGINEERS	**1,497,100**	**34,800**	**1,432,900**	**18,900**	**40,000**	**5,300**
Doctorate	54,300	500	48,700	700	4,000	900
Master's	313,800	5,000	294,100	2,600	16,100	1,000
Bachelor's	1,086,100	29,200	1,048,600	15,500	19,100	2,900
BIOLOGISTS	**205,800**	**65,200**	**192,800**	**5,200**	**6,800**	**1,100**
Doctorate	51,700	9,800	49,000	800	1,400	500
Master's	54,800	16,900	51,000	1,900	1,800	100
Bachelor's	99,100	38,500	92,700	2,500	3,500	400
AGRICULTURAL SCIENTISTS	**154,000**	**14,400**	**150,400**	**1,600**	**1,500**	**500**
Doctorate	16,600	400	16,300	200	200	*
Master's	32,300	3,100	30,700	600	900	100
Bachelor's	105,000	10,800	103,300	800	400	500
MEDICAL SCIENTISTS	**44,900**	**10,800**	**42,300**	**700**	**1,700**	**200**
Doctorate	22,500	3,600	21,600	100	600	200
Master's	9,400	4,800	8,800	400	200	*
Bachelor's	6,300	1,900	5,200	200	900	*
PSYCHOLOGISTS	**132,600**	**52,700**	**128,100**	**3,600**	**600**	**300**
Doctorate	42,800	10,800	42,200	400	100	100
Master's	42,700	19,200	41,000	1,300	200	200
Bachelor's	47,100	22,700	44,900	1,900	300	*
ECONOMISTS	**76,400**	**12,700**	**73,800**	**900**	**1,600**	**200**
Doctorate	13,000	1,200	12,100	100	800	*
Master's	32,200	4,500	30,800	500	700	100
Bachelor's	31,000	6,900	30,600	200	100	100
SOCIOLOGISTS/ANTHROP.	**59,800**	**23,800**	**53,500**	**4,800**	**800**	**700**
Doctorate	11,400	2,900	11,100	100	300	*
Master's	22,200	9,100	20,100	1,500	600	100
Bachelor's	26,000	11,700	22,200	3,200	*	600
OTHER SOCIAL SCIENTISTS	**93,500**	**24,900**	**88,100**	**5,000**	**500**	*
Doctorate	31,100	4,500	30,600	200	300	*
Master's	33,100	10,700	31,100	1,800	200	*
Bachelor's	28,800	9,700	25,900	2,900	*	*

* Too few cases to report.
NOTE: Degree divisions will not add to totals since the "Other" degree category was deleted.

SOURCE; U.S. Scientists and Engineers, 1980, National Science Foundation NSF 82-314

TABLE 4-27

HIGHEST DEGREE LEVEL OF SCIENTISTS AND ENGINEERS IN 1980

	TOTAL			MEN			WOMEN		
	PhD	Master's	Bachelor's	PhD	Master's	Bachelor's	PhD	Master's	Bachelor's
All Fields	11.8	28.0	58.1	11.9	25.6	60.2	11.5	46.5	42.3
Chemists	25.3	16.7	57.9	27.2	16.3	56.3	13.0	19.5	67.5
Physicists	36.4	36.5	27.1	36.9	36.1	27.0	24.1	44.8	31.0
Math/Statisticians	17.3	61.4	21.1	19.5	55.2	25.2	7.6	88.6	3.8
Computer Specialists	2.4	26.4	71.1	2.9	26.7	70.4	0.6	25.2	74.0
Environ. Scientists	16.6	38.4	45.0	17.9	39.1	42.9	6.2	32.7	60.2
Engineers	3.7	19.7	72.6	3.7	19.9	72.3	1.4	13.4	85.1
Biologists	27.9	60.1	12.0	32.8	52.2	15.1	17.1	77.8	5.1
Agric. Scientists	9.5	15.3	75.2	10.5	14.7	74.7	1.8	19.7	78.5
Medical Scientists	49.7	21.5	26.8	56.6	21.1	20.1	30.9	22.7	46.4
Psychologists	32.8	57.1	10.0	38.6	49.9	11.5	22.8	69.6	7.5
Social Scientists	28.7	40.2	31.1	32.7	35.5	31.6	17.2	53.3	29.3

NOTE: Where columns do not add to 100%, remainder is "other and no degree."

SOURCE: U.S. Scientists and Engineers, 1980, National Science Foundation, NSF82-314

TABLE 4-28

SCIENTISTS AND ENGINEERS BY FIELD, SEX AND LABOR FORCE STATUS, 1980

FIELD	LABOR FORCE PARTICIPATION RATES		UNEMPLOYMENT RATES	
	Men	Women	Men	Women
Total All Fields	**92.1**	**89.5**	**1.5**	**2.7**
Physical Scientists	**85.1**	**71.2**	**2.5**	**5.6**
Chemists	84.1	71.5	2.7	6.8
Physicists/Astronomers	86.4	69.0	2.3	*
Other Physical Scientists	89.2	70.8	1.3	*
Mathematical Scientists	**82.2**	**90.2**	**2.4**	**5.4**
Mathematicians	82.6	92.6	2.6	6.0
Statisticians	77.9	72.7	2.7	*
Computer Specialists	**99.5**	**95.8**	**1.8**	**1.5**
Environmental Scientists	**91.4**	**87.6**	**1.1**	**3.0**
Earth Scientists	90.7	87.8	0.5	2.8
Oceanographers	93.1	100.0	11.1	*
Atmospheric Scientists	94.0	89.7	1.6	3.9
Engineers	**92.6**	**95.7**	**1.2**	**1.2**
Aero./Astro.	91.9	85.7	3.4	*
Chemical Engineers	92.8	95.7	1.0	2.2
Civil Engineers	95.7	94.3	1.5	*
Electrical/Electronic	96.0	91.4	1.1	*
Mechanical Engineers	96.6	100.0	0.8	*
Other Engineers	88.6	97.0	1.2	1.2
Life Scientists	**91.5**	**89.5**	**1.5**	**2.7**
Biologists	87.2	89.3	1.0	1.7
Agricultural Scientists	93.7	87.2	2.0	6.3
Medical Scientists	99.1	96.4	0.3	0.9
Psychologists	**94.4**	**88.1**	**1.8**	**2.9**
Social Scientists	**91.5**	**89.4**	**2.7**	**3.4**
Economists	90.8	81.5	2.3	4.0
Socio./Anthrop.	89.1	87.2	2.3	1.7
Other Social Scientists	94.3	94.2	3.3	4.7

SOURCE: National Science Foundation, U.S. Scientists and Engineers, 1980

TABLE 4-29

SCIENTISTS AND ENGINEERS BY FIELD, SEX AND EMPLOYMENT STATUS, 1980

FIELD	TOTAL			LABOR FORCE			UNEMPLOYED/SEEKING			OUTSIDE LABOR FORCE		
	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women
All Fields	**2,964,200**	**2,617,100**	**347,000**	**2,720,300**	**2,409,600**	**310,700**	**45,400**	**36,800**	**8,500**	**243,800**	**207,600**	**36,300**
Physical Scientists	**260,300**	**230,400**	**29,900**	**217,300**	**196,000**	**21,300**	**6,100**	**4,900**	**1,200**	**43,100**	**34,500**	**8,600**
Chemists	178,200	153,700	24,600	146,900	129,300	17,600	4,700	3,500	1,200	31,300	24,400	6,900
Physicists/Astronomers	63,000	60,100	2,900	53,800	51,900	2,000	1,200	1,200	*	9,200	8,300	900
Other Physical Scientists	19,100	16,700	2,400	16,500	14,900	1,700	200	200	*	2,600	1,800	700
Mathematical Scientists	**98,300**	**79,900**	**18,400**	**82,300**	**65,700**	**16,600**	**2,600**	**1,600**	**900**	**16,000**	**14,300**	**1,700**
Mathematicians	86,600	70,500	16,200	73,200	58,200	15,000	2,400	1,500	900	13,400	12,200	1,200
Statisticians	11,700	9,500	2,200	9,100	7,400	1,600	200	200	*	2,600	2,000	600
Computer Specialists	**299,300**	**235,100**	**64,200**	**295,500**	**234,000**	**61,500**	**5,000**	**4,100**	**900**	**3,800**	**1,100**	**2,700**
Environmental Scientists	**96,100**	**84,900**	**11,300**	**87,500**	**77,600**	**9,900**	**1,200**	**900**	**300**	**8,600**	**7,300**	**1,300**
Earth Scientists	70,300	62,100	8,200	63,400	56,300	7,200	500	300	200	6,900	5,900	1,000
Oceanographers	3,000	2,900	200	2,800	2,700	200	300	300	*	200	200	*
Atmospheric Scientists	22,800	19,900	2,900	21,300	18,700	2,600	500	300	100	1,500	1,200	300
Engineers	**1,477,300**	**1,442,300**	**35,000**	**1,368,900**	**1,335,400**	**33,500**	**16,600**	**16,200**	**400**	**108,400**	**106,900**	**1,500**
Aero./Astro.	44,400	42,200	2,100	40,600	38,800	1,800	1,300	1,300	*	3,800	3,400	400
Chemical Engineers	78,100	73,400	4,700	72,600	68,100	4,500	800	700	100	5,500	5,300	200
Civil Engineers	200,400	196,900	3,500	191,700	188,400	3,300	2,900	2,900	*	8,800	8,600	200
Electrical/Electronic	274,300	270,800	3,500	263,100	259,900	3,200	2,800	2,800	*	11,200	10,900	300
Mechanical Engineers	245,300	240,700	4,600	237,000	232,400	4,600	1,900	1,900	*	8,300	8,200	*
Other Engineers	634,900	618,200	16,700	564,000	547,800	16,200	6,800	6,600	200	70,900	70,500	400
Life Scientists	**411,800**	**320,400**	**91,500**	**375,300**	**293,300**	**81,900**	**6,400**	**4,300**	**2,200**	**36,600**	**27,000**	**9,600**
Biologists	189,300	130,700	58,600	166,300	114,000	52,300	2,000	1,100	900	23,100	16,700	6,300
Agricultural Scientists	179,600	157,800	21,800	166,800	147,800	19,000	4,300	3,000	1,200	12,800	10,000	2,800
Medical Scientists	42,900	31,900	11,000	42,100	31,600	10,600	200	100	100	700	300	400
Psychologists	**129,500**	**82,500**	**47,000**	**119,300**	**77,900**	**41,400**	**2,600**	**1,400**	**1,200**	**10,100**	**4,600**	**5,500**
Social Scientists	**191,500**	**141,700**	**49,800**	**174,200**	**129,700**	**44,500**	**5,000**	**3,500**	**1,500**	**17,300**	**11,900**	**5,400**
Economists	65,900	56,700	9,200	59,000	51,500	7,500	1,500	1,200	300	6,900	5,300	1,600
Socio./Anthrop.	54,200	33,900	20,300	47,900	30,200	17,700	1,000	700	300	6,300	3,600	2,700
Other Social Scientists	71,400	50,900	20,500	67,300	48,000	19,300	2,500	1,600	900	4,100	2,900	1,100

Note: Detail may not add to totals because of rounding.

* Too few cases to estimate

SOURCE: Women and Minorities in Science and Engineering and U.S. Scientists and Engineers 1980, National Science Foundation, 1982

TABLE 4-30

SCIENTISTS AND ENGINEERS BY FIELD, RACE AND LABOR FORCE STATUS, 1976, 1978 AND 1980

		TOTAL				LABOR FORCE					UNEMPLOYED/SEEKING				
FIELD	Total	White	Black	Asian	Other[1]	Total	White	Black	Asian	Other[1]	Total	White	Black	Asian	Other[1]
							1976								
ALL FIELDS	2,705,800	2,593,600	40,400	45,400	26,400	2,451,700	2,348,200	36,000	42,600	24,800	74,600	69,400	3,000	1,200	1,000
Physical Scientists	280,600	266,300	4,400	5,900	4,000	237,200	224,800	3,400	5,600	3,600	9,900	9,500	100	200	100
Math. Scientists	110,200	105,300	2,700	1,600	500	92,200	88,000	2,400	1,200	500	3,900	3,100	400	100	300
Computer Specialists	179,900	171,800	3,700	3,700	800	173,500	165,400	3,700	3,600	800	1,100	1,000	200	*	*
Environ. Scientists	85,700	84,600	100	500	500	77,400	76,300	100	500	500	2,600	2,600	*	*	*
Engineers	1,375,200	1,327,300	12,600	23,000	12,400	1,268,000	1,222,400	12,200	21,400	12,100	27,200	25,600	500	800	300
Life Scientists	314,100	302,100	3,600	4,100	4,200	286,300	275,600	3,000	3,900	3,800	8,800	8,600	100	*	100
Psychologists	122,900	116,900	1,600	3,300	1,100	105,700	100,100	1,500	3,200	1,100	8,800	7,700	200	100	*
Social Scientists	237,200	219,400	11,600	3,400	2,800	211,400	195,700	9,800	3,300	2,600	13,100	11,400	1,600	*	100
							1978								
ALL FIELDS	2,741,400	2,621,200	41,800	53,700	24,700	2,507,600	2,393,000	39,600	51,300	23,200	34,400	32,700	600	800	400
Physical Scientists	254,600	243,300	3,700	5,700	1,900	216,700	206,800	3,200	5,300	1,400	4,300	4,200	100	*	100
Math. Scientists	107,800	101,300	3,000	2,000	1,400	89,800	83,900	2,900	1,800	1,200	1,400	1,300	*	*	*
Computer Specialists	237,500	229,100	1,400	6,900	100	234,600	226,300	1,300	6,900	100	600	500	200	*	*
Environ. Scientists	80,800	78,900	700	600	500	73,900	72,200	700	600	500	1,700	1,600	*	*	100
Engineers	1,396,400	1,344,000	11,400	27,000	13,900	1,285,000	1,234,400	10,600	26,400	13,600	16,600	16,500	*	*	100
Life Scientists	327,600	313,100	6,700	5,900	1,900	295,800	282,400	6,600	5,200	1,600	4,900	4,200	*	600	200
Psychologists	131,700	127,000	3,700	100	800	123,200	119,000	3,500	(2)	700	2,300	2,000	1,200	*	*
Social Scientists	205,100	184,600	11,000	5,400	4,000	188,500	168,700	10,700	5,100	4,000	2,500	2,400	100	*	*
							1980								
ALL FIELDS	3,110,700	2,959,700	59,500	81,000	10,500	2,906,000	2,762,600	55,900	77,200	10,200	32,300	29,800	1,200	1,300	*
Physical Scientists	261,900	246,400	5,600	9,500	400	224,400	210,700	4,800	8,500	300	3,900	3,600	100	200	*
Math. Scientists	127,000	117,800	5,000	3,800	500	119,800	110,900	4,800	3,600	500	1,100	1,100	*	*	*
Computer Specialists	354,900	333,200	7,600	13,100	900	347,500	326,300	7,400	12,900	900	2,000	1,400	200	400	*
Environ. Scientists	102,600	100,500	600	1,100	500	94,400	92,500	500	1,000	500	2,400	2,400	*	*	*
Engineers	1,497,100	1,432,900	18,900	40,000	5,300	1,400,500	1,338,500	18,100	38,800	5,100	13,500	12,900	100	400	*
Life Scientists	404,700	385,500	7,500	9,900	1,800	381,300	363,100	7,300	9,200	1,800	4,300	4,200	*	100	*
Psychologists	132,600	128,100	3,600	600	300	124,700	120,400	3,300	600	300	1,700	1,400	300	*	*
Social Scientists	229,700	215,300	10,600	2,900	900	213,200	200,000	9,800	2,600	800	3,400	2,800	400	100	*

[1] Includes American Indians, "Other," and "No report."

* Too few cases to estimate.

Note: Detail may not add to totals because of rounding.

SOURCE: U.S. Scientists and Engineers, National Science Foundation, NSF 82-314, 1982

TABLE 4-31

EMPLOYED SCIENTISTS AND ENGINEERS BY FIELD, SEX AND AGE, 1980

FIELD	Total	24 and Under	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70 and Over
ALL FIELDS	2,873,700	382,800	710,100	325,800	314,500	288,300	251,300	225,000	201,300	109,700	48,600	16,400
Women	362,500	123,000	119,000	34,300	30,100	18,100	13,200	10,400	8,100	3,600	2,100	600
% Women	12.61	32.13	16.76	10.53	9.57	6.28	5.25	4.62	4.02	3.28	4.32	3.66
PHYSICAL SCIENTISTS	220,500	29,700	46,300	22,100	26,500	26,400	19,700	18,400	14,100	10,900	4,800	1,600
Women	26,900	8,100	7,300	3,300	2,600	1,600	1,500	1,000	900	300	100	100
% Women	12.20	27.27	15.77	14.93	9.81	6.06	7.61	5.43	6.38	2.75	2.08	6.25
Chemists	141,800	21,500	33,600	15,300	15,300	12,300	11,300	10,300	9,900	7,700	3,400	1,200
Women	22,200	6,700	5,800	2,800	2,200	1,400	1,100	700	800	300	100	100
% Women	15.66	31.16	17.26	18.30	14.30	11.38	9.73	6.80	8.08	3.90	2.94	8.33
Physicists/Astronomers	58,800	5,100	9,000	5,000	8,800	10,800	7,400	5,600	3,200	2,300	1,300	400
Women	2,500	600	800	100	100	300	300	200	100	*	*	*
% Women	4.25	11.76	8.89	2.00	1.14	2.78	4.05	3.57	3.13	-	-	-
Other Physical Scientists	19,900	3,100	3,800	1,800	2,400	3,300	1,100	2,600	900	900	*	*
Women	2,300	800	700	400	200	*	*	100	*	*	*	*
%Women	11.56	25.81	18.42	22.22	8.33	-	-	-	-	-	-	-
MATHEMATICAL SCIENTISTS	118,700	16,600	26,400	13,700	19,200	12,500	10,300	9,000	4,700	3,900	1,800	600
Women	23,000	5,900	7,100	3,400	3,300	1,400	600	700	300	200	100	*
% Women	19.38	35.54	26.89	24.82	17.19	11.20	5.83	7.78	6.38	5.13	5.56	-
Mathematicians	83,800	8,900	15,000	9,700	15,900	10,500	7,900	7,400	3,500	3,200	1,600	100
Women	13,800	2,400	4,000	2,300	2,800	900	300	700	200	200	100	*
% Women	16.47	26.97	26.67	23.71	17.61	8.57	3.80	9.46	5.71	6.25	6.25	-
Statisticians	34,900	7,700	11,400	4,000	3,300	2,000	2,400	1,600	1,200	700	200	400
Women	9,100	3,500	3,100	1,100	500	300	300	*	100	*	*	*
% Women	26.07	45.45	27.19	27.50	15.15	25.00	12.50	-	8.33	-	-	-
COMPUTER SPECIALISTS	345,500	83,100	110,800	38,400	41,800	35,200	17,800	11,100	4,100	2,800	300	*
Women	89,900	40,600	30,100	6,800	8,000	2,300	1,100	600	300	100	*	*
% Women	26.02	48.86	27.17	17.71	19.14	6.53	6.18	5.41	7.32	3.57	-	-
ENVIRONMENTAL SCIENTISTS	92,000	13,300	29,300	11,900	6,700	5,700	7,700	6,600	5,100	4,200	1,200	500
Women	10,700	4,400	4,400	600	200	200	200	100	300	100	*	*
% Women	11.63	33.08	15.02	5.04	2.99	3.51	2.60	1.52	5.88	2.38	-	-
ENGINEERS	1,387,000	128,500	313,900	156,200	141,200	143,600	135,700	130,800	134,800	64,900	28,700	8,800
Women	32,600	13,600	13,800	1,900	1,000	1,000	200	200	700	100	*	*
% Women	2.35	10.58	4.40	1.22	0.71	0.70	0.15	0.15	0.52	0.15	-	-
LIFE SCIENTISTS	377,100	70,800	107,900	37,400	31,300	32,100	33,000	24,500	18,500	13,400	6,500	1,800
Women	79,000	29,100	27,400	6,000	3,900	3,200	3,200	2,300	1,800	1,300	500	400
% Women	20.95	41.10	25.39	16.04	12.46	9.97	9.70	9.39	9.73	9.70	7.69	22.22
Biologists	190,100	46,300	62,400	18,800	15,400	14,200	9,700	11,000	5,000	4,200	2,600	400
Women	58,600	22,200	21,800	4,900	3,700	2,400	1,000	1,000	700	600	300	*
% Women	30.83	47.95	34.94	26.06	24.03	16.90	10.31	9.09	14.00	14.29	11.54	-
Agricultural Scientists	147,400	24,500	45,500	17,400	10,100	11,700	14,700	8,400	7,000	5,700	2,100	400
Women	13,400	6,900	5,500	500	100	400	*	100	*	*	*	*
% Women	9.09	28.16	12.09	2.87	1.00	3.42	-	1.19	-	-	-	-
Medical Scientists	39,600	*	*	1,200	5,800	6,200	8,600	5,100	6,400	3,500	1,800	900
Women	6,900	*	*	600	100	500	2,200	1,300	1,200	600	200	300
% Women	17.42	-	-	50.00	1.72	8.06	25.58	25.49	18.75	17.14	11.11	33.33
PSYCHOLOGISTS	125,000	16,600	33,500	16,000	16,600	10,800	7,600	10,300	7,300	2,500	1,300	400
Women	47,000	10,200	15,600	5,100	4,800	3,400	2,600	2,800	1,400	400	800	100
% Women	38.21	61.45	46.57	31.88	28.92	31.48	34.21	27.18	19.18	16.00	61.54	25.00
SOCIAL SCIENTISTS	209,900	24,300	42,000	30,200	31,100	22,100	19,500	14,200	12,700	7,100	3,900	2,800
Women	53,700	11,200	13,300	7,200	6,400	4,800	3,700	2,800	2,300	1,100	900	*
% Women	25.58	46.09	31.67	23.84	20.58	21.72	18.97	19.72	18.11	15.49	23.08	-
Economists	70,300	9,300	18,200	7,600	10,100	6,400	5,200	3,200	4,500	1,700	1,800	2,300
Women	11,200	3,900	3,700	1,000	1,000	400	400	100	200	200	100	*
% Women	15.93	41.94	20.33	13.16	9.90	6.25	7.69	3.13	4.44	11.76	5.56	-
Sociologists/Anthropol.	54,900	6,200	9,400	8,200	9,200	5,800	5,400	4,100	3,500	1,900	1,000	300
Women	21,600	4,100	4,900	2,800	3,200	2,500	1,400	1,200	1,200	100	300	*
% Women	39.34	66.13	52.13	34.15	34.78	43.10	25.93	29.27	34.29	5.26	30.00	-
Other Social Scientists	84,600	8,800	14,400	14,300	11,900	9,900	8,800	7,000	4,700	3,600	1,100	200
Women	20,900	3,100	4,700	3,400	2,200	2,000	1,900	1,500	900	800	400	*
% Women	24.70	35.22	32.64	23.78	18.49	20.20	21.59	21.43	19.15	22.22	36.36	-

* Too few cases to estimate

Source: U.S. Scientists and Engineers 1980, National Science Foundation, NSF 82-314

TABLE 4-32

SCIENTISTS AND ENGINEERS BY FIELD, SEX AND TYPE OF EMPLOYER, 1980

	TOTAL			BUSINESS & INDUSTRY			EDUCATIONAL INSTITUTIONS			FEDERAL GOVERNMENT			OTHER[1]		
	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W
TOTAL, ALL FIELDS	2,873,700	362,600	12.8	1,706,800	143,600	8.4	505,700	108,000	21.4	248,400	27,700	11.2	412,900	110,900	26.9
Physical Scientists	220,500	26,900	12.2	116,900	13,000	11.1	55,900	7,500	13.4	19,600	2,600	13.3	28,100	3,800	13.5
Chemists	141,800	22,200	15.7	86,600	11,500	13.3	26,900	5,700	21.2	9,100	1,900	20.9	19,200	3,000	15.6
Physicists/Astronomers	58,800	2,500	4.3	22,400	700	3.1	24,100	1,400	5.8	6,600	200	3.0	5,700	200	3.5
Other	19,900	2,300	11.6	7,900	800	10.1	4,800	400	8.3	3,900	500	12.8	3,400	600	17.6
Mathematical Scientists	118,700	23,000	19.4	42,000	7,900	18.8	52,200	9,600	18.4	12,600	1,800	14.3	11,900	3,600	30.3
Mathematicians	83,800	13,800	16.5	28,100	4,000	14.2	42,800	7,600	17.8	6,400	700	10.9	6,500	1,500	23.1
Statisticians	34,900	9,100	26.1	13,900	3,900	28.1	9,400	2,100	22.3	6,200	1,100	17.7	5,400	2,100	38.9
Computer Specialists	345,500	89,900	26.0	255,300	64,100	25.1	36,600	12,600	34.4	21,500	4,200	19.5	32,200	9,000	28.0
Environmental Scientists	92,000	10,700	11.6	46,500	5,100	11.0	17,000	2,200	12.9	14,400	1,400	9.7	14,200	2,100	14.8
Earth Scientists	71,500	8,700	12.2	40,500	4,400	10.9	12,500	1,600	12.8	9,200	1,000	10.9	9,200	1,700	18.5
Oceanographers	3,000	200	6.7	500	100	20.0	1,100	100	9.1	700	*	-	800	*	-
Atmospheric Scientists	17,500	1,800	10.3	5,400	600	11.1	3,500	500	14.3	4,500	300	6.7	4,100	200	4.9
Engineers	1,387,000	32,600	2.4	1,070,800	24,900	2.3	64,500	2,600	4.0	101,600	2,300	2.3	150,100	2,700	1.8
Aero/Astronomical	46,600	1,500	3.2	30,500	1,200	3.9	1,800	*	-	8,000	200	2.5	6,300	100	1.6
Chemical	72,400	3,600	5.0	63,700	3,000	4.7	4,000	400	10.0	2,000	*	-	2,900	100	3.4
Civil	187,300	3,900	2.1	111,300	2,300	2.1	5,600	200	3.6	17,800	400	2.2	52,500	900	1.7
Electrical/Electronic	255,800	3,800	1.5	202,900	3,700	1.8	14,000	100	0.7	22,900	100	0.4	15,900	*	-
Mechanical	233,100	3,800	1.6	197,700	3,200	1.6	12,600	300	2.4	14,100	200	1.4	8,800	*	-
Other	591,900	16,000	2.7	464,800	11,400	2.4	26,500	1,500	5.7	36,800	1,500	4.1	63,800	1,500	2.4
Life Scientists	377,100	79,000	20.9	107,000	15,500	14.5	153,200	38,300	25.0	50,400	6,700	13.3	66,600	18,400	27.6
Biologists	190,100	58,600	30.8	39,300	10,900	27.7	95,200	30,500	32.1	16,200	3,600	22.2	39,300	13,700	34.9
Agricultural Scientists	147,400	13,400	9.1	63,400	4,400	6.9	31,600	3,900	14.8	32,100	3,000	9.3	20,400	2,200	10.8
Medical Scientists	39,600	6,900	17.4	4,300	200	4.7	26,400	4,000	15.2	2,100	100	4.8	6,900	2,600	37.7
Psychologists	123,000	47,000	38.2	19,300	5,800	30.1	49,000	18,400	37.6	2,800	1,200	42.9	51,800	21,600	41.7
Social Scientists	209,900	53,700	25.6	49,000	7,400	15.1	77,400	16,700	21.6	25,500	7,600	29.8	58,000	22,000	37.9
Economists	70,300	11,200	15.9	24,500	3,200	13.1	23,200	3,300	14.2	13,500	3,300	24.4	9,200	1,500	16.3
Sociologists/Anthrop.	54,900	21,600	39.3	9,100	2,700	29.7	25,200	8,400	33.3	3,700	2,000	54.1	17,000	8,600	50.6
Other	84,600	20,900	24.7	15,500	1,600	10.3	29,000	5,000	17.2	8,300	2,400	28.9	31,800	12,100	38.1

[1] Includes nonprofit organizations; military; state, local and other governments; and "no report."

* Too few cases to estimate.

Note: Detail may not add due to rounding.

SOURCE: U.S. Scientists and Engineers 1980, National Science Foundation, NSF 82-314

TABLE 4-33

SCIENTISTS AND ENGINEERS BY FIELD, SEX AND PRIMARY WORK ACTIVITY, 1980

FIELD	Total		Research		Development		Management of R & D		Management of Other than R & D		Teaching		Other	
	No.	% W	No.	% W	No.	% W	No.	% W	No.	% W	No.	% W	No.	% W
ALL FIELDS	2,873,700		327,000		464,400		217,500		431,500		265,500		1,167,700	
Women	362,600	12.8	61,800	18.9	27,200	5.9	10,400	4.8	23,000	5.3	60,200	22.7	180,100	15.4
PHYSICAL SCIENTISTS	220,500		66,400		27,400		21,800		18,600		25,700		60,800	
Women	26,900	12.2	8,800	13.3	2,200	8.0	700	3.2	1,400	7.5	3,800	14.8	9,900	16.3
Chemists	141,800		40,900		19,700		11,600		12,500		10,200		46,900	
Women	22,200	15.7	7,600	18.6	2,100	10.7	500	4.3	1,000	8.0	2,400	23.5	8,500	18.1
Physicists/Astronomers	58,800		20,100		5,000		7,400		4,800		12,700		8,700	
Women	2,500	4.3	600	3.0	100	2.0	100	1.4	100	2.1	1,100	8.7	600	6.9
MATHEMATICAL SCIENTISTS	118,700		12,500		6,200		6,700		11,200		40,100		42,100	
Women	23,000	19.4	1,600	12.8	900	14.5	400	6.0	1,400	12.5	7,700	19.2	10,900	25.9
Mathematicians	83,800		8,700		5,700		5,800		9,200		36,600		17,900	
Women	13,800	16.5	1,400	16.1	700	12.3	400	6.9	1,100	12.0	7,300	19.9	3,300	18.4
Statisticians	34,900		3,900		500		900		2,000		3,500		24,300	
Women	9,100	26.1	700	17.9	200	40.0	*	-	300	15.0	400	11.4	7,600	31.3
COMPUTER SPECIALISTS	345,500		10,300		47,200		14,400		24,300		8,900		240,300	
Women	89,900	26.0	2,400	23.3	10,700	22.7	1,600	11.1	2,700	11.1	1,900	21.3	70,500	29.3
ENVIRONMENTAL SCIENTISTS	92,000		21,500		6,200		5,100		10,600		8,900		39,700	
Women	10,700	11.6	2,700	12.6	500	8.1	600	11.8	300	2.8	800	9.0	5,700	14.4
Earth Scientists	71,500		16,700		5,300		4,200		8,800		7,600		29,000	
Women	8,700	12.2	2,400	14.4	400	7.5	400	9.5	200	2.3	600	7.9	4,700	16.2
Oceanographers	3,000		1,500		200		300		100		100		700	
Women	200	6.7	100	6.7	*	-	*	-	*	-	*	-	100	14.3
Atmospheric Scientists	17,500		3,400		800		600		1,600		1,200		9,900	
Women	1,800	10.3	200	5.9	100	12.5	100	16.7	100	6.3	200	16.7	1,000	10.1
ENGINEERS	1,387,000		63,800		358,400		124,200		261,800		31,900		546,900	
Women	32,600	2.4	4,000	6.3	8,300	2.3	1,200	1.0	2,000	0.8	600	1.9	16,500	3.0
LIFE SCIENTISTS	377,100		113,100		13,200		21,600		54,600		58,500		115,900	
Women	79,000	20.9	30,500	27.0	2,700	20.5	1,600	7.4	4,500	8.2	14,300	24.4	25,300	21.8
Biologists	190,100		77,300		5,700		9,700		12,000		35,500		49,900	
Women	58,600	30.8	26,000	33.6	1,500	26.3	1,200	12.4	1,900	15.8	9,500	26.8	18,300	36.7
Agricultural Scientists	147,400		24,900		5,300		8,500		37,900		9,700		61,100	
Women	13,400	9.1	2,900	11.6	600	11.3	400	4.7	1,500	4.0	1,400	14.4	6,600	10.8
Medical Scientists	39,600		11,000		2,200		3,400		4,700		13,300		4,900	
Women	6,900	17.4	1,400	12.7	600	27.3	*	-	1,100	23.4	3,400	25.6	400	8.2
PSYCHOLOGISTS	123,000		12,500		1,700		7,800		12,400		37,200		51,500	
Women	47,000	38.2	4,000	32.0	800	47.1	1,800	23.1	3,300	26.6	16,300	43.8	20,700	40.2
SOCIAL SCIENTISTS	209,900		27,000		4,000		15,800		38,000		54,300		70,800	
Women	53,700	25.6	7,600	28.1	1,100	27.5	2,500	15.8	7,500	19.7	14,800	27.3	20,300	28.7
Economists	70,300		13,400		1,000		5,600		8,900		12,700		28,700	
Women	11,200	15.9	3,300	24.6	400	40.0	100	1.8	300	3.4	2,000	15.7	5,300	18.5
Sociologists/Anthrop.	54,900		6,300		1,000		2,900		12,000		18,900		13,900	
Women	21,600	39.3	2,900	46.0	500	50.0	800	27.6	4,200	35.0	7,700	40.7	5,600	40.3

* Too few cases to estimate. NOTE: Detail may not add to totals because of rounding and deletion of "other" category.

SOURCE: Women and Minorities in Science and Engineering, National Science Foundation, 1982

TABLE 4-34

RECENT SCIENCE AND ENGINEERING MASTER'S DEGREE RECIPIENTS BY FIELD, SEX AND LABOR FORCE STATUS, 1978 and 1979 in 1980

Field and sex	Total [1]	Labor force [2]	Total employed	Employed in S/E	Employed in non-S/E	Unemployed, seeking	Employed in field	Full-time graduate students
All fields	110,100	83,500	81,600	66,700	15,000	1,900	59,300	24,100
Men	82,700	63,500	62,700	53,200	9,500	800	47,100	18,400
Women	27,400	20,000	18,900	13,500	5,400	1,100	12,200	5,700
Physical scientists	7,100	4,300	4,200	3,600	600	100	2,600	2,700
Men	6,000	3,400	3,300	3,000	400	100	2,100	2,500
Women	1,100	900	800	600	200	(3)	500	300
Mathematical scientists	6,400	5,200	5,000	3,700	1,300	200	3,100	1,100
Men	4,200	3,300	3,100	2,300	800	100	1,900	1,000
Women	2,200	1,900	1,900	1,300	500	(3)	1,200	100
Computer specialists	6,100	5,500	5,500	5,100	400	(3)	4,500	400
Men	4,900	4,400	4,400	4,100	300	(3)	3,600	400
Women	1,200	1,100	1,100	1,000	100	(3)	1,000	(3)
Environmental scientists	5,200	4,100	4,000	3,500	500	100	3,100	1,000
Men	4,100	3,200	3,100	2,800	300	100	2,500	900
Women	1,100	900	900	700	200	(3)	500	100
Engineers	33,200	28,300	28,100	26,700	1,400	200	24,400	4,600
Men	31,100	26,700	26,600	25,300	1,300	100	23,300	4,200
Women	2,100	1,600	1,500	1,400	100	100	1,200	400
Life scientists	21,800	15,200	14,800	11,700	3,100	400	10,600	6,300
Men	15,000	10,400	10,300	8,100	2,200	100	7,300	4,600
Women	6,700	4,700	4,500	3,600	900	200	3,300	1,700
Psychologists	16,200	10,800	10,400	7,200	3,200	400	6,700	4,300
Men	7,600	5,100	5,100	3,600	1,500	(3)	3,400	2,200
Women	8,600	5,700	5,300	3,500	1,800	400	3,300	2,100
Social scientists	14,100	10,200	9,600	5,200	4,400	600	4,200	3,600
Men	9,800	6,900	6,600	3,900	2,800	300	3,000	2,700
Women	4,300	3,200	3,000	1,300	1,600	300	1,200	800

[1] Includes full-time graduate students.

[2] Excludes full-time graduate students.

[3] Too few cases to estimate.

Note: Detail may not add to totals because of rounding.

Source: National Science Foundation, unpublished data.

SOURCE: Women and Minorities in Science and Engineering, National Science Foundation, 1982

TABLE 4-35

RECENT SCIENCE AND ENGINEERING MASTER'S DEGREE RECIPIENTS BY FIELD, RACE AND LABOR FORCE STATUS, 1978 and 1979 in 1980

Field and race	Total [1]	Labor force [2]	Total employed	Employed in S/E	Employed in non-S/E	Unemployed, seeking	Employed in field	Full-time graduate students
All fields	110,100	83,500	81,600	66,700	15,000	1,900	59,300	24,100
White	98,900	75,900	74,400	60,300	14,000	1,600	53,900	20,800
Black	2,900	2,000	1,800	1,300	500	300	1,000	700
Other minorities[3]	6,800	4,600	4,600	4,300	300	(4)	3,800	2,100
Physical scientists	7,100	4,300	4,200	3,600	600	100	2,600	2,700
White	5,900	3,700	3,700	3,000	600	100	2,300	2,100
Black	300	200	200	200	(4)	(4)	200	100
Other minorities	700	200	200	200	(4)	(4)	100	500
Mathematical scientists	6,400	5,200	5,000	3,700	1,300	200	3,100	1,100
White	6,100	4,900	4,800	3,500	1,300	200	2,900	1,000
Black	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Other minorities	300	200	200	100	(4)	(4)	100	100
Computer specialists	6,100	5,500	5,500	5,100	400	(4)	4,500	400
White	5,400	4,900	4,900	4,500	400	(4)	4,000	300
Black	100	100	100	100	(4)	(4)	(4)	(4)
Other minorities	600	500	500	500	(4)	(4)	500	200
Environmental scientists	5,200	4,100	4,000	3,500	500	100	3,100	1,000
[illegible]ite	5,000	3,900	3,900	3,400	500	100	2,900	700
[illegible]ck	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)
[illegible]er minorities	100	100	100	100	(4)	(4)	100	(4)
Engineers	33,200	28,300	28,100	26,700	1,400	200	24,400	4,600
White	27,800	24,400	24,200	22,900	1,300	100	21,100	3,300
Black	700	400	400	400	(4)	(4)	300	200
Other minorities	4,200	3,100	3,000	3,000	100	(4)	2,600	1,100
Life scientists	21,800	15,200	14,800	11,700	3,100	400	10,600	6,300
White	20,500	14,300	14,000	11,100	2,900	300	10,000	5,900
Black	500	400	300	300	100	(4)	300	100
Other minorities	600	400	400	300	100	(4)	300	200
Psychologists	16,200	10,800	10,400	7,200	3,200	400	6,700	4,300
White	15,500	10,300	10,100	7,000	3,100	300	6,500	4,100
Black	500	300	200	200	(4)	100	200	100
Other minorities	200	100	100	100	100	(4)	100	100
Social scientists	14,100	10,200	9,600	5,200	4,400	600	4,200	3,600
White	12,800	9,300	8,800	4,900	3,900	500	4,200	3,200
Black	800	600	600	200	300	100	(4)	200
Other minorities	200	100	100	100	(4)	(4)	(4)	(4)

[1] Includes full-time graduate students.

[2] Excludes full-time graduate students.

[3] Overall, 98 percent of "Other minorities" are classified as Asians.

[4] Too few cases to estimate.

Note: Detail does not add to totals because of rounding and because "No report" is excluded.

Source: National Science Foundation, unpublished data.

SOURCE: Women and Minorities in Science and Engineering, National Science Foundation, 1982

TABLE 4-36

RECENT SCIENCE AND ENGINEERING DEGREE RECIPIENTS BY FIELD, SEX, DEGREE LEVEL, LABOR FORCE PARTICIPATION RATES, SCIENCE AND ENGINEERING UTILIZATION RATES AND UNEMPLOYMENT RATES
1978 and 1979 in 1980

Field and degree level	Labor force participation rates		Science and engineering utilization rates		Unemployment rates	
	Men	Women	Men	Women	Men	Women
		Bachelor's				
All fields	98.3	93.7	58.1	36.8	3.2	4.3
Physical scientists	97.4	92.8	76.2	73.2	2.6	1.7
Mathematical scientists	99.0	94.8	60.3	59.3	4.0	1.9
Computer specialists	99.5	100.0	90.6	94.4	1.6	2.9
Environmental scientists	98.3	89.6	57.5	49.7	4.6	7.9
Engineers	99.2	99.4	91.5	90.9	1.4	1.3
Life scientists	97.4	93.9	50.4	49.0	4.0	7.1
Psychologists	99.2	92.5	18.4	17.0	3.6	2.9
Social scientists	97.2	93.4	17.7	19.4	5.4	4.3
		Master's				
All fields	98.7	92.1	83.8	67.4	1.2	5.4
Physical scientists	96.4	100.0	87.0	69.0	1.7	4.8
Mathematical scientists	100.0	91.4	71.7	69.9	3.6	1.9
Computer specialists	99.1	90.3	93.8	89.1	(1)	(1)
Environmental scientists	99.5	93.4	88.4	76.6	1.8	(1)
Engineers	99.2	95.0	94.9	86.0	0.2	8.2
Life scientists	99.8	94.5	77.5	76.5	1.1	5.2
Psychologists	94.9	87.7	70.8	62.2	0.8	6.6
Social scientists	87.9	94.1	55.7	41.8	4.5	7.9

[1] Too few cases to estimate.
Source: National Science Foundation, unpublished data.

SOURCE: Women and Minorities in Science and Engineering, National Science Foundation, 1982

TABLE 4-37

RECENT SCIENCE AND ENGINEERING DEGREE RECIPIENTS BY FIELD, RACE, DEGREE LEVEL LABOR FORCE PARTICIPATION RATES, SCIENCE AND ENGINEERING UTILIZATION RATES AND UNEMPLOYMENT RATES, 1978 and 1979 in 1980

	Labor force participation rates			Science and engineering utilization rates			Unemployment rates		
Field and degree level	White	Black	Other	White	Black	Other	White	Black	Other
			Bachelor's						
All fields	96.7	95.9	98.1	51.4	39.2	58.2	3.3	9.3	4.8
Physical scientists	96.2	100.0	100.0	75.2	71.8	98.9	2.2	1.0	(1)
Mathematical scientists	98.3	84.0	100.0	58.5	87.4	86.9	3.2	(1)	(1)
Computer specialists	99.5	[illegible]	100.0	94.5	65.9	100.0	0.4	15.9	(1)
Environmental scientists	96.0	100.0	100.0	55.7	40.6	86.4	5.4	(1)	13.6
Engineers	99.2	100.0	100.0	91.7	85.5	94.7	1.2	4.2	3.2
Life scientists	96.2	92.4	94.5	50.0	52.3	46.4	5.1	2.7	10.4
Psychologists	94.7	98.1	100.0	18.1	12.9	12.6	2.8	9.0	(1)
Social scientists	95.6	94.3	100.0	18.6	19.0	(1)	4.3	13.3	(1)
			Master's						
All fields	97.2	92.3	97.9	79.4	64.5	93.2	2.0	12.8	0.9
Physical scientists	96.7	100.0	100.0	82.8	64.0	100.0	2.0	11.4	(1)
Mathematical scientists	96.5	100.0	100.0	70.5	100.0	79.9	3.1	(1)	(1)
Computer specialists	96.9	100.0	100.0	92.1	100.0	100.0	(1)	(1)	(1)
Environmental scientists	98.0	100.0	100.0	85.6	(1)	100.0	1.5	(1)	(1)
Engineers	99.5	76.0	98.9	93.9	100.0	96.6	0.6	(1)	1.3
Life scientists	98.2	100.0	92.3	77.2	72.2	79.6	2.2	12.8	(1)
Psychologists	91.1	100.0	100.0	67.4	48.3	46.3	2.8	38.8	(1)
Social scientists	97.2	92.4	73.4	52.6	40.4	60.4	5.4	10.4	(1)

[1]Too few cases to estimate.

Source: National Science Foundation, unpublished data.

SOURCE: Women and Minorities in Science and Engineering, National Science Foundation, 1982

TABLE 4-38

RECENT SCIENCE AND ENGINEERING BACHELOR'S DEGREE RECIPIENTS BY FIELD, SEX AND LABOR FORCE STATUS, 1978 and 1979 in 1980

Field and sex	Total [1]	Labor force [2]	Total employed	Employed in S/E	Employed in non-S/E	Unemployed, seeking	Employed in field	Full-time graduate students
All fields	598,600	445,100	429,100	226,600	202,500	16,000	187,100	138,400
Men	394,600	294,300	284,800	171,100	113,700	9,500	144,300	95,200
Women	204,000	150,800	144,300	55,500	88,800	6,500	42,800	43,100
Physical scientists	33,900	18,500	18,100	14,000	4,100	400	8,400	14,600
Men	26,000	13,700	13,300	10,400	2,900	400	6,300	12,000
Women	7,900	4,800	4,800	3,500	1,200	100	2,100	2,700
Mathematical scientists	24,600	19,500	18,900	11,700	7,200	600	9,400	4,500
Men	14,400	10,600	10,200	6,400	3,800	400	5,500	3,700
Women	10,200	8,900	8,700	5,300	3,400	200	3,800	800
Computer specialists	16,000	15,100	14,800	13,800	900	300	13,400	900
Men	11,700	10,800	10,600	9,800	800	200	9,500	800
Women	4,300	4,300	4,200	4,000	100	100	3,900	(3)
Environmental scientists	20,000	14,900	14,100	8,300	5,800	800	5,200	4,500
Men	15,000	11,300	10,800	6,500	4,300	500	4,100	3,600
Women	4,900	3,600	3,300	1,800	1,500	300	1,200	900
Engineers	119,200	108,600	107,200	99,300	7,800	1,500	94,300	9,800
Men	110,500	100,500	99,100	91,900	7,200	1,400	87,400	9,200
Women	8,700	8,100	8,000	7,400	600	100	6,800	600
Life scientists	152,700	97,500	92,400	48,600	43,800	5,100	36,200	51,200
Men	97,900	60,400	58,000	30,400	27,500	2,400	22,900	35,900
Women	54,800	37,100	34,400	18,200	16,300	2,600	13,300	15,300
Psychologists	88,100	65,300	63,200	11,500	51,800	2,100	9,000	19,300
Men	35,200	26,200	25,200	4,800	20,400	900	3,500	8,800
Women	52,900	39,200	38,000	6,700	31,400	1,200	5,600	10,500
Social scientists	144,200	105,700	100,500	19,500	81,000	5,200	11,300	33,600
Men	84,000	60,900	57,600	10,800	45,800	3,300	5,100	21,400
Women	60,300	44,900	42,900	8,700	34,200	1,900	6,200	12,300

[1] Includes full-time graduate students.

[2] Excludes full-time graduate students.

[3] Too few cases to estimate.

Note: Detail may not add to totals because of rounding.

Source: National Science Foundation, unpublished data.

SOURCE: Women and Minorities in Science and Engineering, National Science Foundation, 1982

TABLE 4-39

RECENT SCIENCE AND ENGINEERING BACHELOR'S DEGREE RECIPIENTS BY FIELD, RACE AND LABOR FORCE STATUS, 1978 and 1979 in 1980

Field and race	Total [1]	Labor force [2]	Total employed	Employed in S/E	Employed in non-S/E	Unemployed, seeking	Employed in field	Full-time graduate students
All fields	598,600	445,100	429,100	226,600	202,500	16,000	187,100	138,400
White	552,800	412,200	398,700	211,700	187,000	13,500	174,200	126,700
Black	25,400	19,500	17,700	7,700	10,000	1,800	6,500	5,100
Other minorities[3]	12,600	8,600	8,200	5,000	3,200	400	4,400	3,800
Physical scientists	33,900	18,500	18,100	14,000	4,100	400	8,400	14,600
White	31,800	17,700	17,300	13,300	4,000	400	8,100	13,400
Black	900	400	400	300	100	(4)	100	500
Other minorities	700	100	100	100	(4)	(4)	100	600
Mathematical scientists	24,600	19,500	18,900	11,700	7,200	600	9,400	4,500
White	22,900	18,400	17,800	10,800	7,100	600	8,900	4,100
Black	1,100	700	700	600	100	(4)	200	300
Other minorities	400	300	300	300	(4)	(4)	300	100
Computer specialists	16,000	15,100	14,800	13,800	900	300	13,400	900
White	13,700	12,800	12,700	12,100	700	(4)	11,700	900
Black	1,600	1,600	1,400	1,100	300	300	1,100	(4)
Other minorities	500	500	500	500	(4)	(4)	500	(4)
Environmental scientists	20,000	14,900	14,100	8,300	5,800	800	5,200	4,500
White	19,500	14,500	13,700	8,100	5,600	800	5,100	4,400
Black	200	200	200	100	100	(4)	(4)	(4)
Other minorities	200	200	100	100	(4)	(4)	100	(4)
Engineers	119,200	108,600	107,200	99,300	7,800	1,500	94,300	9,800
White	110,800	101,500	100,200	93,100	7,100	1,300	88,100	8,600
Black	3,400	3,000	2,900	2,600	300	100	2,500	400
Other minorities	3,100	2,700	2,600	2,600	100	100	2,500	400
Life scientists	152,700	97,500	92,400	48,600	43,800	5,100	36,200	51,200
White	142,100	91,300	86,600	45,600	41,000	4,600	34,200	47,300
Black	3,900	2,200	2,200	1,200	1,000	100	700	1,500
Other minorities	4,500	2,900	2,600	1,300	1,200	300	800	1,400
Psychologists	88,100	65,300	63,200	11,500	51,800	2,100	9,000	19,300
White	81,100	59,900	58,300	10,800	47,400	1,700	8,400	17,900
Black	4,800	4,100	3,700	500	3,200	400	500	700
Other minorities	1,100	800	800	100	700	(4)	100	300
Social scientists	144,200	105,700	100,500	19,500	81,000	5,200	11,300	33,600
White	130,800	96,200	92,000	17,900	74,100	4,100	9,700	30,200
Black	9,500	7,400	6,400	1,400	5,000	1,000	1,400	1,700
Other minorities	2,200	1,200	1,200	(4)	1,200	(4)	(4)	1,000

[1] Includes full-time graduate students.

[2] Excludes full-time graduate students.

[3] Overall, 84 percent of "Other minorities" are classified as Asians.

[4] Too few cases to estimate.

Note: Detail does not add to totals because of rounding and because "No report" is excluded.

Source: National Science Foundation, unpublished data.

SOURCE: Occupations of Recent College Graduates, NCES 81-106, National Center for Education Statistics, April 1981

TABLE 4-40

OCCUPATION IN FEBRUARY 1978 OF 1976-77 BACHELOR'S DEGREE RECIPIENTS BY MAJOR FIELD OF STUDY AND SEX

MALES — OCCUPATION	TOTAL BACHELOR'S RECIPIENTS		PROFESSIONAL FIELDS: TOTAL PROFESSIONS		BUSINESS AND MANAGEMENT		EDUCATION		ENGINEERING		HEALTH PROFESSIONS		PUBLIC AFFAIRS/ SOCIAL SERVICES	
	NUMBER	PCT	NUMBER	PCT	NUMBER	PCT	NUMBER	PCT	NUMBER	PCT	NUMBER	PCT	NUMBER	PCT
TOTAL	512,006	100	236,482	100	124,045	100	30,523	100	51,894	100	15,545	100	10,475	100
PROFESSIONAL, MANAGERIAL AND TECHNICAL	267,561	52	151,339	64	71,897	58	20,862	72	38,813	75	11,519	74	4,248	41
BUSINESS PERSONS AND MANAGERS	96,258	19	65,836	28	57,926	47	2,362	7	3,179	6	628	4	1,741	17
ACCOUNTANTS	32,825	6	31,684	13	31,623	25	61	*	0	0	0	0	0	0
MANAGEMENT AND ADMINISTRATION	60,590	12	32,033	14	24,828	20	2,003	6	3,179	6	628	4	1,359	13
OTHER	2,793	1	2,137	1	1,473	1	277	1	0	0	0	0	367	4
EDUCATORS	42,193	8	23,774	10	2,711	2	20,131	58	697	1	235	2	0	0
ELEMENTARY/SECONDARY TEACHERS	20,761	6	20,259	9	695	1	19,089	55	41	*	235	2	0	0
COLLEGE TEACHERS	4,749	2	2,780	1	1,548	1	576	2	656	1	0	0	0	0
OTHER	2,534	*	735	*	269	*	466	1	0	0	0	0	0	0
ENGINEERS	36,940	7	34,417	15	2,566	2	355	1	30,723	59	0	0	774	7
CIVIL	6,695	2	6,308	4	193	*	272	1	7,842	15	0	0	0	0
ELECTRICAL	9,446	2	9,177	4	387	*	0	0	8,791	17	0	0	0	0
OTHER	18,799	4	18,932	7	1,985	2	83	*	14,090	27	0	0	774	7
HEALTH PROFESSIONALS	12,540	2	10,010	4	0	0	0	0	0	0	9,817	63	193	2
REGISTERED NURSES	4,479	1	4,077	2	0	0	0	0	0	0	4,077	26	0	0
PRACTITIONERS	5,274	1	4,307	2	0	0	0	0	0	0	4,307	28	0	0
OTHER	2,787	1	1,626	1	0	0	0	0	0	0	1,433	9	193	2
PUB AFFAIRS & SERVICES, RELIG WORKERS	10,806	2	2,213	1	440	*	757	2	0	0	0	0	1,006	10
SOCIAL WORKERS	5,475	1	1,071	*	449	*	61	*	0	0	0	0	580	6
OTHER	5,332	1	1,142	*	0	0	716	2	0	0	0	0	426	4
BIO & PHYS SCIENTISTS, MATHEMATICIANS	5,036	1	451	*	373	*	79	*	0	0	0	0	0	0
FINE ARTS	5,031	1	608	*	438	*	171	*	0	0	0	0	0	0
SOCIAL SCIENTISTS & PSYCHOLOGISTS	5,248	1	1,845	1	1,652	1	0	0	193	*	0	0	0	0
RESEARCH WORKERS NOT SPECIFIED	6,452	1	2,092	1	1,161	1	157	*	774	1	0	0	0	0
COMMUNICATIONS	6,823	1	591	*	193	*	397	1	0	0	0	0	0	0
COMPUTER SPECIALISTS	10,408	2	3,362	1	2,009	2	0	0	1,354	3	0	0	0	0
TECHNICIANS	19,377	4	5,299	2	1,842	1	374	1	1,893	4	659	5	351	3
HEALTH	5,787	1	1,111	*	193	*	79	*	0	0	439	5	0	0
ENGINEERING AND SCIENCE	12,875	3	3,902	2	1,598	1	256	1	1,893	4	0	0	157	2
OTHER	714	*	286	*	51	*	41	*	0	0	0	0	193	2
OTHER PROF, MANAGERIAL, & TECHNICAL	9,580	2	842	*	580	*	79	*	0	0	0	0	193	2
NONPROF, NONMANAGERIAL, NONTECHNICAL	180,731	28	59,726	25	80,734	33	6,886	20	5,996	12	1,236	8	4,716	47
SALES	37,481	7	21,192	9	17,805	14	1,545	5	967	2	295	2	386	4
CLERICAL	37,903	7	16,833	7	12,969	10	974	3	1,741	3	577	2	592	5
CRAFTS	22,831	4	8,692	4	3,899	3	1,003	5	2,053	4	193	1	593	6
OPERATIVES	11,793	2	4,108	2	2,241	2	986	3	862	1	0	0	410	4
LABORERS, INCLUDING FARM	8,911	2	2,349	1	987	1	513	1	347	1	0	0	862	8
SERVICE	20,881	5	6,755	3	2,813	2	1,165	3	347	1	170	1	1,921	18
ARMED FORCES	12,489	2	6,237	3	3,542	3	757	2	878	2	193	1	967	9
UNEMPLOYED	23,480	5	7,506	3	2,511	2	1,431	4	2,321	4	774	5	264	3
NOT IN THE LABOR FORCE	61,956	12	10,882	5	4,820	4	472	1	3,690	7	1,824	12	75	1
FEMALES														
TOTAL	410,455	100	200,232	100	38,033	100	103,235	100	2,527	100	45,707	100	10,630	100
PROFESSIONAL, MANAGERIAL AND TECHNICAL	235,777	57	141,745	71	20,609	54	75,220	73	1,265	50	39,623	87	4,728	45
BUSINESS PERSONS AND MANAGERS	38,458	9	22,649	11	17,980	47	2,541	2	0	0	1,548	3	580	5
ACCOUNTANTS	12,161	3	10,842	5	10,570	28	79	*	0	0	193	*	0	0
MANAGEMENT AND ADMINISTRATION	23,504	6	10,175	5	6,212	16	2,223	2	0	0	1,161	3	580	5
OTHER	2,793	1	1,632	1	1,198	3	240	*	0	0	193	*	0	0
EDUCATORS	99,760	24	72,299	36	723	2	69,038	67	0	0	2,345	5	193	2
ELEMENTARY/SECONDARY TEACHERS	88,809	21	69,171	35	336	1	66,762	65	0	0	1,880	4	193	2
COLLEGE TEACHERS	6,322	2	1,878	1	387	1	1,026	1	0	0	466	1	0	0
OTHER	4,810	1	1,250	1	0	0	1,250	1	0	0	0	0	0	0
ENGINEERS	2,367	1	1,222	1	51	*	0	0	1,021	40	0	0	0	0
CIVIL	298	*	298	*	0	0	0	0	298	12	0	0	0	0
ELECTRICAL	536	*	387	*	0	0	0	0	387	15	0	0	0	0
OTHER	1,533	*	538	*	51	*	0	0	387	15	0	0	0	0
HEALTH PROFESSIONALS	36,779	9	30,614	15	0	0	798	1	0	0	29,577	65	272	3
REGISTERED NURSES	25,127	6	22,503	11	0	0	83	*	0	0	22,420	49	0	0
PRACTITIONERS	3,724	1	3,533	2	0	0	0	0	0	0	3,533	8	0	0
OTHER	7,924	2	4,583	2	0	0	707	1	0	0	3,624	8	272	3
PUB AFFAIRS & SERVICES, RELIG WORKERS	11,984	3	6,582	3	0	0	386	1	0	0	276	1	3,742	35
SOCIAL WORKERS	11,598	3	3,572	2	0	0	489	1	0	0	193	*	2,490	23
OTHER	5,346	1	1,776	1	0	0	397	1	0	0	83	*	952	9
BIO & PHYS SCIENTISTS, MATHEMATICIANS	3,319	1	919	*	193	1	0	0	0	0	774	2	0	0
FINE ARTS	1,745	0	351	*	0	0	157	*	193	8	0	0	0	0
SOCIAL SCIENTISTS & PSYCHOLOGISTS	6,121	1	316	*	820	2	41	*	0	0	0	0	0	0
RESEARCH WORKERS NOT SPECIFIED	3,754	1	558	*	41	*	120	*	0	0	397	1	0	0
COMMUNICATIONS	4,671	2	459	*	387	1	472	*	0	0	0	0	0	0
COMPUTER SPECIALISTS	2,459	1	691	*	345	1	143	*	0	0	193	*	0	0
TECHNICIANS	14,319	3	5,830	3	0	0	316	*	0	0	4,723	10	0	0
HEALTH	8,978	2	5,830	3	0	0	316	*	0	0	4,723	10	0	0
ENGINEERING AND SCIENCE	5,303	1	0	0	0	0	0	0	0	0	0	0	0	0
OTHER PROF, MANAGERIAL, & TECHNICAL	1,559	1	811	*	161	*	747	1	0	0	0	0	0	0
NONPROF, NONMANAGERIAL, NONTECHNICAL	93,680	26	31,371	16	10,903	29	19,201	19	580	23	1,543	3	3,967	38
SALES	17,510	4	4,378	2	2,477	7	1,550	2	0	0	0	0	200	2
CLERICAL	43,219	10	21,109	11	7,920	19	11,731	11	387	15	832	2	2,395	23
CRAFTS	5,175	1	931	*	387	1	157	*	193	8	193	*	0	0
OPERATIVES	3,313	*	279	*	0	0	272	*	0	0	0	0	0	0
LABORERS, INCLUDING FARM	512	0	0	0	0	0	0	0	0	0	0	0	0	0
SERVICE	10,950	3	3,601	2	124	*	2,391	2	0	0	330	1	929	9
ARMED FORCES	1,855	*	193	*	193	1	83	*	0	0	193	*	193	2
UNEMPLOYED	23,067	6	8,777	4	2,304	6	3,920	4	193	8	1,960	3	811	8
NOT IN THE LABOR FORCE	90,102	19	18,590	8	4,613	12	8,273	8	387	15	2,490	5	1,199	11

SOURCE: Occupations of Recent College Graduates, NCES 81-106, National Center for Education Statistics, April 1981

TABLE 4-40

OCCUPATION IN FEBRUARY 1978 OF 1976-77 BACHELOR'S DEGREE RECIPIENTS BY MAJOR FIELD OF STUDY AND SEX
(Continued)

	ARTS AND SCIENCE												ALL OTHER	
	TOTAL ARTS AND SCIENCE		BIOLOGICAL SCIENCE		MATHEMATICS AND PHYSICAL SCIENCES		SOCIAL SCIENCES		HUMANITIES		PSYCHOLOGY			
MALES OCCUPATION	NUMBER	PCT	NUMBER	PCT	NUMBER	PCT	NUMBER	PCT	NUMBER	PCT	NUMBER	PCT	NUMBER	PCT
TOTAL	208,456	100	47,205	100	27,522	100	71,522	100	33,590	100	28,618	100	70,190	100
PROFESSIONAL, MANAGERIAL AND TECHNICAL	82,152	40	16,386	35	15,128	55	28,103	39	12,161	36	10,374	42	33,877	48
BUSINESS PERSONS AND MANAGERS	23,958	12	2,114	4	1,275	5	12,201	17	3,715	11	4,593	19	6,415	9
ACCOUNTANTS	774	*	0	0	193	1	580	1	0	0	0	0	387	1
MANAGEMENT AND ADMINISTRATION	22,797	11	2,114	4	1,082	4	11,487	16	3,715	11	4,399	18	5,760	8
OTHER	387	*	0	0	0	0	193	*	0	0	193	1	269	*
EDUCATORS	15,249	7	2,671	6	3,607	13	4,919	7	2,779	8	1,273	5	3,170	5
ELEMENTARY/SECONDARY TEACHERS	8,621	4	1,136	2	1,063	4	3,775	5	1,761	5	886	4	961	1
COLLEGE TEACHERS	5,173	3	1,535	3	2,157	8	656	1	631	2	193	1	1,845	3
OTHER	1,455	1	0	0	387	1	488	1	387	1	193	1	344	*
ENGINEERS	1,867	1	193	*	1,623	6	51	*	0	0	0	0	656	1
CIVIL	0	0	0	0	0	0	0	0	0	0	0	0	387	1
ELECTRICAL	193	*	0	0	193	1	0	0	0	0	0	0	75	*
OTHER	1,674	1	193	*	1,430	5	51	*	0	0	0	0	193	*
HEALTH PROFESSIONALS	2,321	1	1,354	3	193	1	387	1	0	0	387	2	208	*
REGISTERED NURSES	193	*	193	*	0	0	0	0	0	0	0	0	208	*
PRACTITIONERS	967	*	967	2	0	0	0	0	0	0	0	0	0	0
OTHER	1,161	1	193	*	193	1	387	1	0	0	387	2	0	0
PUB AFFAIRS & SERVICES, RELIG WORKERS	6,193	3	491	1	193	1	1,363	2	2,015	6	2,131	9	2,207	3
SOCIAL WORKERS	2,669	1	0	0	0	0	591	1	51	*	2,027	8	1,741	2
OTHER	3,524	2	491	1	193	1	772	1	1,964	6	104	*	466	1
BIO & PHYS SCIENTISTS, MATHEMATICIANS	4,921	2	774	2	3,637	13	580	1	0	0	0	0	193	*
FINE ARTS	2,698	1	0	0	193	1	967	1	1,534	5	0	0	2,128	3
SOCIAL SCIENTISTS & PSYCHOLOGISTS	2,479	1	193	*	0	0	2,092	3	0	0	193	1	924	1
RESEARCH WORKERS NOT SPECIFIED	2,813	1	580	1	193	1	1,071	1	193	1	774	3	1,548	2
COMMUNICATIONS	2,774	1	774	2	0	0	1,052	2	348	1	0	0	3,458	5
COMPUTER SPECIALISTS	4,666	2	0	0	2,717	10	774	1	774	2	402	2	2,380	3
TECHNICIANS	9,953	5	7,228	15	1,301	5	789	1	193	1	428	2	4,125	6
HEALTH	4,483	2	4,185	9	0	0	104	*	193	1	0	0	193	*
ENGINEERING AND SCIENCE	5,235	3	2,862	6	1,301	5	684	1	0	0	397	2	3,738	5
OTHER	235	*	193	*	0	0	0	0	0	0	41	*	193	*
OTHER PROF, MANAGERIAL, & TECHNICAL	2,194	1	0	0	193	1	1,197	2	610	2	193	1	6,404	9
NONPROF, NONMANAGERIAL, NONTECHNICAL	57,299	28	10,394	22	4,823	18	20,137	28	12,858	38	9,087	32	27,349	39
SALES	12,330	6	2,515	5	684	2	3,924	5	3,485	10	1,741	7	3,700	5
CLERICAL	16,192	8	1,930	4	2,128	8	6,630	9	1,750	5	4,780	19	4,864	7
CRAFTS	10,996	5	2,307	5	1,147	4	3,726	5	3,468	10	398	1	2,343	3
OPERATIVES	5,755	3	774	2	79	*	2,219	3	1,306	5	678	4	1,935	3
LABORERS, INCLUDING FARM	3,749	2	656	1	348	1	1,624	2	929	3	193	1	2,813	4
SERVICE	8,277	4	2,203	5	367	1	2,555	4	1,935	6	1,197	5	11,609	17
ARMED FORCES	4,950	2	580	1	1,753	6	1,049	2	193	1	774	3	1,202	2
UNEMPLOYED	12,772	6	3,339	7	348	1	4,470	6	3,350	10	1,315	5	3,402	5
NOT IN THE LABOR FORCE	46,520	23	16,401	35	5,527	19	16,098	23	5,027	15	3,067	12	4,369	6
FEMALES														
TOTAL	168,311	100	21,041	100	8,669	100	46,305	100	58,473	100	33,223	100	98,374	100
PROFESSIONAL, MANAGERIAL AND TECHNICAL	67,517	41	10,143	47	5,683	66	16,185	35	24,383	45	11,123	33	25,276	50
BUSINESS PERSONS AND MANAGERS	10,281	6	347	2	201	2	4,433	10	3,199	6	2,100	6	5,334	11
ACCOUNTANTS	1,269	1	0	0	151	2	269	1	774	1	75	*	51	*
MANAGEMENT AND ADMINISTRATION	8,045	5	347	2	51	1	3,774	8	2,232	4	1,638	5	5,283	10
OTHER	967	1	0	0	0	0	387	1	193	*	387	1	0	0
EDUCATORS	21,786	13	1,106	5	2,128	25	4,128	9	11,799	22	2,626	8	5,392	11
ELEMENTARY/SECONDARY TEACHERS	14,951	9	644	3	698	8	2,917	6	8,653	16	2,062	6	4,415	9
COLLEGE TEACHERS	4,057	2	269	1	1,430	16	824	2	1,341	2	193	1	387	1
OTHER	2,779	2	193	1	0	0	387	1	1,805	3	370	1	589	1
ENGINEERS	104	*	0	0	0	0	0	0	0	0	104	*	1,101	2
CIVIL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ELECTRICAL	0	0	0	0	0	0	0	0	0	0	0	0	193	*
OTHER	104	*	0	0	0	0	0	0	0	0	104	*	967	2
HEALTH PROFESSIONALS	2,119	1	402	2	0	0	402	1	104	*	1,151	3	3,248	6
REGISTERED NURSES	1,270	1	0	0	0	0	258	*	104	*	955	3	568	1
PRACTITIONERS	193	*	193	1	0	0	0	0	0	0	0	0	0	0
OTHER	656	*	209	1	0	0	193	*	0	0	193	1	2,680	5
PUB AFFAIRS & SERVICES, RELIG WORKERS	8,847	5	0	0	0	0	3,374	7	1,935	4	3,374	10	1,354	3
SOCIAL WORKERS	6,827	4	0	0	0	0	2,671	6	967	2	3,145	10	1,101	2
OTHER	1,827	1	0	0	0	0	658	1	967	2	193	1	545	1
BIO & PHYS SCIENTISTS, MATHEMATICIANS	2,552	2	1,493	5	967	11	0	0	0	0	178	1	0	0
FINE ARTS	5,018	3	0	0	0	0	1,161	3	4,063	9	157	*	2,412	5
SOCIAL SCIENTISTS & PSYCHOLOGISTS	1,255	1	0	0	193	2	513	1	0	0	545	2	0	0
RESEARCH WORKERS NOT SPECIFIED	2,311	1	193	1	193	2	1,255	3	193	*	491	1	387	1
COMMUNICATIONS	2,633	1	0	0	0	0	1,460	3	760	1	193	1	3,374	7
COMPUTER SPECIALISTS	1,708	1	0	0	859	10	0	0	387	1	0	0	542	1
TECHNICIANS	8,134	5	6,629	31	1,063	14	75	*	193	*	193	1	1,101	2
HEALTH	3,735	2	3,544	16	0	0	0	0	193	*	0	0	193	*
ENGINEERING AND SCIENCE	4,399	3	3,085	14	1,063	12	75	*	0	0	193	1	967	2
OTHER PROF, MANAGERIAL, & TECHNICAL	1,726	1	0	0	79	1	387	1	1,161	2	0	0	918	1
NONPROF, NONMANAGERIAL, NONTECHNICAL	52,939	32	3,758	17	1,387	16	17,763	38	17,314	32	12,691	38	19,193	31
SALES	5,843	3	193	1	0	0	2,206	5	2,279	4	1,453	4	2,111	3
CLERICAL	32,526	21	1,549	6	1,119	13	11,660	25	9,580	16	8,765	26	9,502	15
CRAFTS	1,858	1	580	3	0	0	0	0	1,257	2	193	1	758	1
OPERATIVES	838	1	0	0	79	1	193	*	579	1	0	0	765	1
LABORERS, INCLUDING FARM	367	*	0	0	0	0	0	0	0	0	367	1	193	*
SERVICE	9,283	5	1,356	7	193	2	2,703	6	2,703	5	2,913	9	3,864	7
ARMED FORCES	317	*	0	0	0	0	193	*	193	*	0	0	0	0
UNEMPLOYED	11,497	7	1,041	5	193	2	3,193	7	4,773	8	1,173	4	3,545	5
NOT IN THE LABOR FORCE	31,374	19	5,034	24	1,113	13	4,090	9	5,265	9	6,273	19	8,113	12

SOURCE: Series of Earned Degrees Conferred, 1948-1979, National Center for Education Statistics; and U.S. Scientists and Engineers, 1980, National Science Foundation, NSF 82-314

TABLE 4-41

NUMBER OF BACHELOR'S DEGREES GRANTED, 1948-1979, COMPARED WITH 1980 POPULATION OF SCIENTISTS AND ENGINEERS, BY FIELD AND SEX

FIELD	Bachelor's Degrees, 1948-1979				Scientists & Engineers, 1980				S/E's in 1980 as a % of B.S. Degrees Granted 1948-1979	
	Total	Men	Women	% W	Total	Men	Women	% W	Men	Women
Physical/Environmental Sciences	510,521	433,318	77,203	15.1	364,500	316,200	48,400	13.3	73.0	62.7
Math/Statistical/ Computer Science	496,092	327,046	169,046	34.1	481,900	361,400	120,600	25.0	110.5	71.3
Biological/Agricultural Science	1,147,483	860,022	287,461	25.0	359,800	280,200	79,600	22.1	32.6	27.7
Psychology	692,898	357,188	335,251	48.4	132,600	79,900	52,700	39.7	22.4	15.7
Social Sciences*	1,851,718	1,354,777	496,441	26.8	229,700	168,400	61,400	26.7	12.4	12.4
Engineering	1,247,226	1,228,975	18,251	1.5	1,497,100	1,462,300	34,800	2.3	119.0	190.7
Total Science and Engineering	**5,945,938**	**4,561,326**	**1,383,653**	**23.3**	**3,110,700**	**2,702,600**	**408,100**	**13.1**	**61.4**	**29.5**

* Anthropology, Sociology, Economics and Political Science.

SOURCE: Science Education Databook, National Science Foundation, SE-80-3

TABLE 4-42

Average Underemployment[1] of 1976-77 Bachelor's Degree Recipients Working Full Time, by Major Degree Field and Sex, February 1978

Major degree field	Percent Underemployed		
	Total	Male	Female
Total	21.6	23.7	19.0
Biological sciences	21.6	30.5	7.8
Engineering	7.9	8.4	0
Physical sciences & mathematics	14.1	16.0	9.4
Psychology	36.8	32.0	41.0
Social sciences & public affairs	36.3	40.4	29.5
Humanities	32.9	32.5	33.2
Business & management	18.6	19.9	14.2
Education	14.0	15.9	13.3
Health professions	2.5	2.4	2.3
Communications	23.0	19.7	26.3
Other	32.7	34.1	31.2

[1] Bachelor's degree recipients working full time are defined as underemployed if in a job that is not professional, technical, managerial, or administrative and when asked responded that job did not require a college degree. Definition includes additional stipulation that they are not enrolled in school.

SOURCE: Characteristics of Doctoral Scientists and Engineers in the United States, 1981, National Science Foundation, NSF 82-332

TABLE 5-1

DOCTORAL SCIENTISTS AND ENGINEERS IN ACADEMIC INSTITUTIONS BY FIELD, RANK AND SEX, 1981

FIELD AND SEX	Professor	%	Associate Professor	%	Assistant Professor	%	Instructor	%	Other	%	Total Faculty**
Total Fields											
Men	**53,918**	**47.3**	**33,536**	**29.4**	**22,056**	**19.3**	**776**	**0.7**	**3,555**	**3.1**	**113,991**
Women	**3,218**	**19.6**	**4,678**	**28.6**	**6,599**	**40.3**	**459**	**2.8**	**1,251**	**7.6**	**16,381**
Physical Scientists											
Men	**9,607**	**55.3**	**4,508**	**26.0**	**2,408**	**13.9**	**66**	**0.4**	**726**	**4.2**	**17,364**
Women	**331**	**29.6**	**294**	**26.3**	**293**	**26.3**	**68**	**6.1**	**118**	**10.6**	**1,116**
Chemists											
Men	5,589	55.8	2,372	23.7	1,504	15.0	16	0.2	484	4.8	10,014
Women	282	29.7	250	26.3	245	25.8	62	6.5	103	10.8	950
Physicists/Astronomers											
Men	4,018	54.7	2,136	29.1	904	12.3	50	0.7	242	3.3	7,350
Women	49	29.5	44	26.5	48	28.9	6	3.6	15	9.0	166
Mathematical Scientists											
Men	**4,768**	**48.0**	**3,101**	**31.2**	**1,765**	**17.8**	**126**	**1.3**	**154**	**1.6**	**9,934**
Women	**186**	**21.0**	**261**	**29.4**	**358**	**46.4**	**34**	**3.8**	**43**	**4.8**	**887**
Mathematicians											
Men	4,121	47.8	2,741	31.8	1,480	17.2	126	1.5	140	1.6	8,620
Women	170	23.5	221	30.6	259	35.8	28	3.9	40	5.5	723
Statisticians											
Men	647	49.2	360	27.4	285	21.7	*	-	14	1.1	1,314
Women	16	9.8	40	24.4	99	60.4	6	3.7	3	1.8	164
Computer Specialists											
Men	**565**	**31.4**	**665**	**37.0**	**473**	**26.3**	**24**	**1.3**	**71**	**3.9**	**1,798**
Women	**14**	**9.2**	**52**	**34.2**	**76**	**50.0**	**6**	**3.9**	**4**	**2.6**	**152**
Environmental Scientists											
Men	**1,940**	**46.2**	**1,243**	**29.6**	**934**	**22.2**	**6**	**0.1**	**77**	**1.8**	**4,200**
Women	**32**	**14.1**	**76**	**33.5**	**111**	**48.9**	*	-	**8**	**3.5**	**227**
Earth Scientists											
Men	1,632	49.7	1,026	31.2	571	17.4	6	0.2	51	1.6	3,286
Women	24	15.0	59	36.9	69	43.1	*	-	8	5.0	160
Oceanographers											
Men	134	30.5	128	29.2	165	37.6	*	-	12	2.7	439
Women	8	17.0	8	17.0	31	66.0	*	-	*	-	47
Atmospheric Scientists											
Men	174	36.6	89	18.7	198	41.7	*	-	14	2.9	475
Women	*	-	9	45.0	11	55.0	*	-	*	-	20
Engineers											
Men	**7,183**	**55.1**	**3,644**	**27.9**	**1,864**	**14.3**	*	-	**352**	**2.7**	**13,043**
Women	**29**	**19.7**	**40**	**27.2**	**76**	**51.7**	*	-	**2**	**1.4**	**147**
Life Scientists											
Men	**12,695**	**43.2**	**8,754**	**29.8**	**6,374**	**21.7**	**353**	**1.2**	**1,174**	**4.0**	**29,404**
Women	**955**	**18.1**	**1,615**	**30.6**	**1,995**	**37.8**	**178**	**3.4**	**472**	**9.0**	**5,271**
Biological Scientists											
Men	7,989	41.8	6,089	31.9	4,098	21.4	226	1.2	667	3.5	19,112
Women	693	18.7	1,092	29.4	1,402	37.8	120	3.2	376	10.1	3,709
Agricultural Scientists											
Men	2,578	52.1	1,216	24.6	1,013	20.5	*	-	145	2.9	4,952
Women	20	15.6	17	13.3	91	71.1	*	-	*	-	128
Medical Scientists											
Men	2,128	39.9	1,449	27.1	1,263	23.7	127	2.4	362	6.8	5,340
Women	242	16.9	506	35.3	502	35.0	58	4.0	96	6.7	1,434
Psychologists											
Men	**5,078**	**44.8**	**3,491**	**30.8**	**2,323**	**20.5**	**29**	**0.3**	**389**	**3.4**	**11,324**
Women	**752**	**20.3**	**875**	**23.6**	**1,605**	**43.4**	**72**	**1.9**	**311**	**8.4**	**3,701**
Social Scientists											
Men	**12,082**	**44.9**	**8,130**	**30.2**	**5,915**	**22.0**	**172**	**0.6**	**612**	**2.3**	**26,924**
Women	**919**	**18.8**	**1,465**	**30.0**	**2,085**	**42.7**	**101**	**2.1**	**293**	**6.0**	**4,880**
Economists											
Men	3,516	50.0	1,663	23.6	1,786	25.4	68	1.0	*	-	7,033
Women	149	25.5	184	31.5	209	35.7	23	3.9	17	2.9	585
Sociologists/Anthropologists											
Men	2,180	38.8	1,998	35.9	1,255	22.5	27	0.5	132	2.4	5,572
Women	343	17.6	630	32.3	823	42.1	12	0.6	137	7.0	1,955
Other Social Scientists											
Men	6,406	44.7	4,469	31.2	2,874	20.1	77	0.5	480	3.4	14,319
Women	427	18.2	651	27.8	1,053	45.0	66	2.8	159	5.9	2,342

* No Cases Reported. ** Includes the "No Report" Category.

SOURCE: Employment of Minority Ph.D.'s: Changes Over Time by Betty D. Maxfield, National Academy of Sciences, 1981

TABLE 5-2

ACADEMICALLY EMPLOYED DOCTORATES, BY FIELD OF PhD AND RACIAL/ETHNIC CATEGORY, 1979

Ph.D. Field	Grand Total	Whites		Minorities								
				U.S.-Born					Foreign-Born			
		U.S. Born	Frgn Born	Total	Hisp	Black	Asian	Am In	Total	Hisp	Black	Asian
Science/Engineering												
Academically Employed	158,578	124,289	15,375	3,807	880	1,484	932	511	8,488	335	447	7,683
Percentages in:												
EMP Fields	38.9	37.0	49.3	28.4	30.7	27.6	27.9	28.2	47.6	46.6	13.6	49.5
Mathematics	7.7	7.4	8.5	6.3	9.7	8.3	2.0	2.3	9.8	14.0	4.7	9.6
Computer Sciences	0.5	0.6	0.1	0.5	0.3	0.0	0.4	2.5	0.6	0.6	0.0	0.6
Physics/Astronomy	8.2	7.5	11.9	5.3	6.9	4.5	4.9	5.7	9.7	1.5	0.0	10.7
Chemistry	9.0	8.7	11.6	10.4	5.9	9.2	14.7	13.9	8.5	14.0	7.6	8.3
Environmental Scis	2.9	3.0	3.4	1.0	2.4	0.1	0.5	2.2	1.4	1.8	1.3	1.4
Engineering	10.6	9.8	13.8	4.9	5.5	5.5	5.3	1.6	17.6	14.6	0.0	18.8
Life Sciences	28.4	29.1	23.0	31.0	33.6	27.8	35.6	27.4	31.6	26.0	31.5	31.9
Agricultural Sciences	4.8	5.1	2.6	5.0	5.2	3.2	6.7	6.8	6.1	12.8	10.3	5.6
Medical Sciences	2.8	2.7	2.7	4.2	5.9	4.6	3.1	2.2	4.2	3.6	4.0	4.3
Biological Sciences	20.7	21.3	17.7	21.8	22.5	19.9	25.9	18.4	21.2	9.6	17.0	22.0
Behavioral Sciences	32.7	33.9	27.7	40.5	35.7	44.6	36.5	44.4	20.8	27.5	54.8	18.6
Psychology	11.1	12.1	6.7	15.7	11.7	18.1	15.1	16.8	1.9	18.5	1.8	1.1
Social Sciences	21.6	21.8	21.0	24.8	24.0	26.5	21.4	27.6	18.9	9.0	53.0	17.5
Humanities												
Academically Employed	52,853	40,247	4,243	1,715	756	674	104	181	1,153	591	93	458
Percentages in:												
History	24.1	25.2	18.3	22.0	20.6	28.2	12.5	9.9	13.0	3.7	40.9	19.7
English	29.1	32.4	9.6	21.8	27.5	20.6	15.4	6.1	7.5	0.8	18.3	11.8
Languages Total	20.2	15.4	51.6	29.9	45.5	14.5	18.3	28.2	53.8	83.8	10.8	25.1
Classics	2.2	2.2	2.9	1.1	0.0	1.9	0.0	3.3	0.6	0.0	0.0	1.5
Modern Languages	18.0	13.2	48.7	28.7	45.5	12.6	18.3	24.9	53.2	83.8	10.8	23.6
Other Humanities	26.5	27.0	20.6	26.4	6.3	36.6	53.8	55.8	25.7	11.7	30.1	43.4
Art History	2.4	2.5	2.7	0.5	0.0	0.1	3.8	2.2	2.4	1.2	0.0	4.6
Music	6.4	7.1	2.5	8.8	1.1	13.5	17.3	18.8	2.0	1.0	6.5	2.4
Speech/Theater	6.0	6.3	2.9	6.9	0.3	11.0	3.8	21.0	1.0	0.0	1.1	2.2
Philosophy	8.3	8.3	7.0	3.9	1.1	1.9	26.0	10.5	12.4	5.6	22.6	19.4
Other Fields	3.4	2.9	5.6	6.2	4.0	10.1	2.9	3.3	7.9	3.9	0.0	14.8

Source: 1979 Survey of Doctorate Recipients

SOURCE: Science, Engineering, and Humanities Doctorates in the United States, 1981 Profile, National Academy of Sciences/National Research Council, 1981

TABLE 5-3

ACADEMIC POSITION OF DOCTORAL SCIENTISTS AND ENGINEERS BY YEAR OF PH.D., FIELD OF PH.D.,AND SEX, 1981

	Field of Doctorate/Sex							
	All Fields		EMP		Life Sciences		Behav/Soc Sci	
1981 Academic Position	M	F	M	F	M	F	M	F
Total, 1938-1959 Ph.D.s	31,500	2,300	13,300	500	9,700	1,000	8,500	800
Faculty	92.3	82.3	88.3	82.1	95.3	77.9	95.0	87.5
Professor	**84.8**	**58.0**	**80.1**	**60.0**	**87.0**	**49.2**	**89.5**	**66.9**
Associate Professor	**6.7**	**19.1**	**6.8**	**15.2**	**8.0**	**21.9**	**5.1**	**18.4**
Assistant Professor	**0.3**	**2.9**	**0.4**	**2.8**	**0.2**	**4.5**	**0.3**	**1.1**
Instructor	**0.4**	**2.3**	**0.9**	**4.1**	**0.1**	**2.4**	**0.2**	**1.1**
Nonfaculty	2.9	7.2	5.8	7.9	1.1	9.4	0.5	4.2
Teaching Staff*	**0.2**	**0.8**	**0.1**	**0.4**	**0.3**	**0.5**	**0.3**	**1.5**
Research Staff†	**2.7**	**6.4**	**5.7**	**7.5**	**0.8**	**8.9**	**0.2**	**2.8**
Postdoctoral Appointment	0.1	0.1	0.1	0.4	0.1	0.0	0.2	0.0
Other/No Report	4.7	10.4	5.8	9.6	3.5	12.7	4.3	8.2
Total, 1960-1969 Ph.D.s	54,000	5,200	25,100	1,000	14,200	1,900	14,700	2,300
Faculty	92.6	83.7	89.4	78.6	94.2	80.9	96.8	88.4
Professor	**62.8**	**36.5**	**62.2**	**29.7**	**59.5**	**27.7**	**67.0**	**47.2**
Associate Professor	**27.0**	**33.6**	**24.2**	**34.0**	**31.2**	**34.2**	**27.5**	**32.8**
Assistant Professor	**2.3**	**11.7**	**2.0**	**11.3**	**2.8**	**17.4**	**2.3**	**6.8**
Instructor	**0.6**	**1.9**	**0.9**	**3.6**	**0.6**	**1.5**	**0.0**	**1.5**
Nonfaculty	3.3	6.8	4.9	8.6	2.9	9.8	0.9	3.5
Teaching Staff*	**0.2**	**1.3**	**0.2**	**1.4**	**0.2**	**1.4**	**0.3**	**1.1**
Research Staff†	**3.0**	**5.6**	**4.7**	**7.2**	**2.7**	**8.4**	**0.6**	**2.4**
Postdoctoral Appointment	0.4	1.8	0.6	2.9	0.2	2.9	0.2	0.2
Other/No Report	3.7	7.7	5.2	9.9	2.7	6.3	2.1	7.9
Total, 1970-1974 Ph.D.s	36,400	6,500	13,400	1,000	10,600	2,300	12,400	3,200
Faculty	86.6	81.5	79.9	76.2	90.1	77.7	90.9	85.8
Professor	**17.4**	**9.2**	**14.6**	**7.8**	**12.2**	**6.0**	**25.0**	**11.8**
Associate Professor	**50.8**	**38.2**	**50.4**	**34.0**	**50.1**	**33.9**	**51.8**	**42.5**
Assistant Professor	**17.3**	**31.6**	**14.3**	**27.9**	**26.2**	**35.7**	**13.0**	**29.8**
Instructor	**1.1**	**2.5**	**0.7**	**6.3**	**1.7**	**2.2**	**1.1**	**1.6**
Nonfaculty	7.4	8.7	13.4	12.6	4.4	12.4	3.4	4.9
Teaching Staff*	**0.6**	**1.0**	**0.5**	**2.0**	**0.4**	**0.5**	**0.9**	**1.1**
Research Staff†	**6.7**	**7.7**	**12.8**	**10.5**	**4.0**	**11.9**	**2.5**	**3.8**
Postdoctoral Appointment	1.1	2.6	1.1	3.9	1.8	4.7	0.6	0.6
Other/No Report	4.9	7.2	5.6	7.4	3.7	5.2	5.2	8.7
Total, 1975-1980 Ph.D.s	35,100	10,200	11,800	1,100	11,400	3,800	11,900	5,300
Faculty	69.3	64.1	66.2	63.5	57.8	46.9	83.4	76.5
Professor	**0.8**	**2.0**	**1.0**	**1.0**	**0.7**	**1.5**	**0.6**	**2.7**
Associate Professor	**12.8**	**9.8**	**12.1**	**6.7**	**7.3**	**7.1**	**18.6**	**12.5**
Assistant Professor	**53.2**	**47.5**	**51.0**	**51.2**	**46.7**	**33.5**	**61.5**	**56.6**
Instructor	**2.6**	**4.8**	**2.1**	**4.7**	**3.0**	**4.8**	**2.7**	**4.7**
Nonfaculty	9.1	8.8	13.2	14.7	7.5	7.9	6.7	8.2
Teaching Staff*	**0.4**	**1.6**	**0.4**	**1.0**	**0.4**	**0.8**	**0.4**	**2.2**
Research Staff†	**8.7**	**7.3**	**12.8**	**13.7**	**7.0**	**7.2**	**6.3**	**5.9**
Postdoctoral Appointment	16.7	19.7	16.2	16.9	30.5	39.7	3.9	6.0
Other/No Report	4.9	7.4	4.4	4.9	4.2	5.5	5.9	9.3

*Includes nonfaculty staff members whose primary work activity is teaching.

†Includes nonfaculty staff members whose primary work activity is basic research, applied research, development, and design.

NOTE: EMP = Engineering, Mathematics, Computer Sciences, Physics, Astronomy, Chemistry, and Earth, Environmental Sciences.
Life Sciences = Agricultural Sciences, Medical Sciences, and Biological Sciences.
Behav/Soc Sci = Psychology and Social Sciences.

SOURCE: Science, Engineering, and Humanities Doctorates in the United States, 1981 Profile, National Academy of Sciences/National Research Council, 1981

TABLE 5-4

ACADEMIC POSITION OF HUMANITIES PH.D.'S BY YEAR OF DOCTORATE, FIELD OF DOCTORATE, AND SEX, 1981

1981 Academic Position/ Year of Ph.D.	Field of Doctorate/Sex									
	All Fields		Eng/Amer Lit		History		Other Lang.		Other Humn.	
	M	F	M	F	M	F	M	F	M	F
Total, 1938-1959 Ph.D.s	7,300	1,000	2,100	300	2,400	200	1,200	300	1,600	200
Faculty	94.8	84.2	96.5	77.1	93.2	81.2	93.3	90.6	96.1	89.3
[redacted]										
Nonfaculty	0.4	2.1	0.0	3.0	0.0	0.0	2.2	3.0	0.0	1.1
[redacted]										
Postdoctoral Appointment	0.5	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.6	0.0
Other/No Report	4.3	13.7	3.5	19.9	6.8	18.8	2.2	6.4	3.3	9.6
Total, 1960-1969 Ph.D.s	13,800	3,200	3,800	1,200	4,100	500	2,400	900	3,500	600
Faculty	93.5	87.7	91.0	81.1	96.3	90.7	95.4	93.0	91.6	91.0
[redacted]										
Nonfaculty	0.5	1.7	0.0	3.2	0.0	0.0	0.6	1.2	1.6	0.5
[redacted]										
Postdoctoral Appointment	0.4	1.0	0.0	1.5	0.0	1.7	1.1	0.2	0.8	0.5
Other/No Report	5.6	9.7	9.0	14.3	3.7	7.6	2.9	5.5	6.1	8.0
Total, 1970-1974 Ph.D.s	12,200	4,600	3,100	1,700	3,600	700	2,300	1,400	3,200	800
Faculty	91.6	85.3	93.1	84.5	85.8	83.5	96.0	87.3	93.7	85.3
[redacted]										
Nonfaculty	1.6	2.2	0.7	1.5	2.5	4.6	1.2	2.4	1.9	1.6
[redacted]										
Postdoctoral Appointment	0.8	1.2	0.1	1.3	2.2	1.6	0.6	0.8	0.2	1.0
Other/No Report	5.9	11.3	6.1	12.6	9.5	10.3	2.2	9.4	4.2	12.2
Total, 1975-1980 Ph.D.s	8,900	5,700	2,200	1,900	2,200	800	1,500	1,700	3,000	1,300
Faculty	88.1	82.3	89.7	86.1	84.4	73.8	91.8	83.4	87.8	80.3
[redacted]										
Nonfaculty	2.2	3.4	1.6	3.9	4.9	1.8	0.1	3.9	1.7	2.9
[redacted]										
Postdoctoral Appointment	0.8	1.6	0.2	0.3	0.5	4.0	0.8	1.0	1.6	3.0
Other/No Report	8.9	12.6	8.5	9.6	10.2	20.4	7.3	11.6	8.9	13.8

*Includes nonfaculty staff members whose primary work activity is teaching.
+Includes nonfaculty staff members whose primary work activity is basic research, applied research, development, or design.

SOURCE: Employment of Minority Ph.D.'s: Changes Over Time by Betty D. Maxfield, National Academy of Sciences, 1981

TABLE 5-5

ACADEMIC POSITIONS HELD BY HUMANITIES DOCTORATES BY YEAR OF PHD AND RACIAL/ETHNIC CATEGORY, 1979

Academic Rank	Grand Total	Whites		Minorities								
		U.S. Born	Frgn Born	U.S.-Born					Foreign-Born			
				Total	Hisp	Black	Asian	Am In	Total	Hisp	Black	Asian
1960-78 Ph.D.s												
Academically Employed	44,216	34,287	3,558	1,492	662	587	95	148	1,067	538	93	425
Percentage as:												
Professor	27.4	27.5	25.7	28.4	25.1	33.2	3.2	40.5	21.1	19.5	0.0	28.2
Associate Professor	33.5	32.7	36.1	28.5	26.6	34.6	26.3	14.2	33.6	37.7	36.6	28.5
Assistant Professor	27.3	28.0	28.2	35.0	43.2	26.2	37.9	31.1	37.2	37.9	52.7	32.7
Instructor	3.4	3.5	2.8	4.2	2.0	1.5	30.5	7.4	4.1	3.2	5.4	3.8
Other	7.6	7.6	6.2	2.7	1.5	3.1	2.1	6.8	3.8	1.3	5.4	6.8
No Report	0.8	0.8	1.0	1.3	1.7	1.4	0.0	0.0	0.2	0.4	0.0	0.0
1960-69 Ph.D.s												
Academically Employed	16,710	12,327	1,508	436	205	162	33	36	271	142	*	126
Percentage as:												
Professor	55.4	56.7	53.2	72.7	74.6	79.6	60.6	97.2	55.7	39.4	*	75.4
Associate Professor	33.6	33.7	34.5	19.5	20.0	17.9	42.4	2.8	35.8	47.9	*	20.6
Assistant Professor	4.8	4.5	4.6	2.5	5.4	0.0	0.0	0.0	6.6	12.7	*	0.0
Instructor	1.0	0.7	0.3	4.4	0.0	0.6	57.6	0.0	0.0	0.0	*	0.0
Other	4.5	4.0	6.2	0.6	0.0	0.0	0.0	0.0	1.8	0.0	*	4.0
No Report	0.6	0.4	1.2	0.9	0.0	2.5	0.0	0.0	0.0	0.0	*	0.0
1970-78 Ph.D.s												
Academically Employed	27,506	21,960	2,050	1,056	457	425	62	112	796	396	90	294
Percentage as:												
Professor	10.4	11.0	5.5	10.1	2.8	15.5	4.8	22.3	9.3	12.4	0.0	8.4
Associate Professor	33.4	32.1	37.2	32.2	29.5	40.9	17.7	17.9	32.8	34.1	34.4	31.8
Assistant Professor	41.0	41.2	45.5	48.4	60.2	36.2	58.1	41.1	47.6	47.0	54.4	46.5
Instructor	4.8	5.0	4.7	4.1	2.8	2.1	16.1	9.8	5.5	4.3	5.6	5.4
Other	9.4	9.7	6.2	3.8	2.2	4.2	3.2	8.9	4.5	1.8	5.6	8.0
No Report	1.0	1.0	0.9	1.4	2.4	0.9	0.0	0.0	0.3	0.5	0.0	0.0

*Population estimates based on less than 3 respondents have not been reported.

Source: 1979 Survey of Doctorate Recipients.

TABLE 5-6

ACADEMIC POSITIONS HELD BY SCIENCE AND ENGINEERING DOCTORATES BY YEAR OF PHD AND RACIAL/ETHNIC CATEGORY, 1979

Academic Rank	Grand Total	Whites		Minorities								
		U.S. Born	Frgn Born	U.S.-Born					Foreign-Born			
				Total	Hisp	Black	Asian	Am In	Total	Hisp	Black	Asian
1960-78 Ph.D.s												
Academically Employed	125,174	98,904	10,765	3,306	830	1,237	748	491	7,684	326	440	6,895
Percentage as:												
Professor	28.1	27.2	37.8	23.6	22.3	18.9	27.3	32.0	26.3	0.0	20.0	28.[illegible]
Associate Professor	31.1	31.2	27.5	29.2	27.6	28.5	29.4	33.6	30.5	54.3	31.1	29.4
Assistant Professor	26.9	27.4	26.8	33.3	37.7	37.2	25.0	28.7	28.0	34.4	37.3	26.4
Instructor	1.7	1.7	0.4	2.4	1.0	0.8	7.2	1.6	3.0	3.7	4.8	2.8
Other	9.1	9.2	9.8	8.6	8.6	12.0	5.7	4.1	9.1	7.1	0.0	9.8
No Report	3.1	3.3	1.7	2.9	2.9	2.5	5.3	0.0	3.1	0.6	6.8	3.0
1960-69 Ph.D.s												
Academically Employed	55,056	42,234	5,931	1,171	264	250	422	235	3,153	89	68	2,991
Percentage as:												
Professor	55.3	55.0	58.6	51.6	19.6	51.6	45.3	65.1	57.9	6.0	94.1	59.5
Associate Professor	32.1	31.9	29.2	37.5	44.3	36.4	35.8	34.0	30.9	96.6	5.9	29.5
Assistant Professor	4.2	4.5	4.1	1.3	0.0	5.2	0.0	0.9	3.3	0.0	0.0	3.4
Instructor	0.6	0.4	0.2	3.3	0.0	0.0	9.2	0.0	1.8	0.0	0.0	1.9
Other	5.2	5.3	6.2	2.9	5.3	6.8	0.7	0.0	4.1	3.4	0.0	4.2
No Report	2.6	2.9	1.5	3.4	0.8	0.0	9.0	0.0	2.0	0.0	0.0	2.1
1970-78 Ph.D.s												
Academically Employed	70,118	56,670	4,814	2,135	566	987	326	256	4,531	237	372	3,899
Percentage as:												
Professor	6.7	6.5	12.1	8.2	9.5	10.6	4.0	1.6	4.3	0.0	6.5	4.4
Associate Professor	30.3	30.7	25.4	24.7	19.8	26.5	21.2	33.2	30.2	38.4	35.8	29.4
Assistant Professor	44.7	44.5	45.9	50.9	55.3	45.3	57.4	54.3	45.2	47.3	44.1	44.9
Instructor	2.5	2.6	0.6	1.9	1.4	1.0	4.6	3.1	3.8	5.1	5.6	2.5
Other	12.3	12.1	14.1	11.7	10.1	13.4	12.3	7.8	12.6	8.4	0.0	14.1
No Report	3.5	3.6	1.9	2.6	3.9	3.1	0.6	0.0	3.9	0.8	8.1	2.7

*Population estimates based on less than 3 respondents have not been reported.

Source: 1979 Survey of Doctorate Recipients.

SOURCE: Employment of Minority Ph.D.'s: Changes Over Time by Betty D. Maxfield, National Academy of Sciences, 1981

TABLE 5-7

PERCENTAGE OF ACADEMICALLY EMPLOYED DOCTORATES, BY SEX AND RACIAL/ETHNIC CATEGORY

	Grand Total	Whites		Minorities								
				U.S.-Born					Foreign-Born			
		U.S. Born	Frgn Born	Total	Hisp	Black	Asian	Am In	Total	Hisp	Black	Asian
Science/Engineering												
Total Employed	295,731	231,029	27,044	6,313	1,423	2,531	1,581	778	19,516	848	638	18,007
% in Academe	53.6	53.8	56.9	60.3	61.8	58.6	59.0	65.7	43.5	39.5	70.1	42.7
Men Employed	265,942	207,901	24,455	5,238	1,264	1,889	1,406	679	17,787	717	579	16,468
% in Academe	52.7	52.9	56.0	59.2	60.0	58.1	57.1	65.1	42.2	37.1	70.5	41.3
Women Employed	29,789	23,128	2,589	1,075	159	642	175	99	1,729	131	59	1,539
% in Academe	61.8	62.0	64.9	65.7	76.1	60.3	73.7	69.7	57.0	52.7	66.1	57.0
Humanities												
Total Employed	62,896	48,068	4,882	2,103	920	795	127	261	1,263	632	97	522
% in Academe	84.0	83.7	86.9	81.6	82.2	84.8	81.9	69.3	91.3	93.5	95.9	87.7
Men Employed	47,800	36,756	3,299	1,518	637	579	67	235	896	441	76	379
% in Academe	84.4	84.0	87.8	82.2	86.2	85.3	73.1	66.4	92.5	95.5	94.7	88.7
Women Employed	15,096	11,312	1,583	585	283	216	60	26	367	191	21	143
% in Academe	82.8	82.7	85.0	79.8	73.1	83.3	91.7	96.2	88.3	89.0	100.0	85.3

Source: 1979 Survey of Doctorate Recipients.

TABLE 5-8

PERCENTAGE OF ACADEMICALLY EMPLOYED DOCTORATES BY YEAR OF PhD AND RACIAL/ETHNIC CATEGORY

	Grand Total	Whites		Minorities								
				U.S.-Born					Foreign-Born			
		U.S. Born	Frgn Born	Total	Hisp	Black	Asian	Am In	Total	Hisp	Black	Asian
Science/Engineering												
Employed 1960-69 Ph.D.s	95,264	73,396	10,026	1,733	391	412	656	274	5,866	129	75	5,662
% in Academe	57.8	57.5	59.4	67.6	67.5	60.7	64.3	85.8	53.8	69.0	90.7	52.9
Employed 1970-78 Ph.D.s	138,831	110,168	8,760	3,679	897	1,706	641	435	12,370	638	556	11,153
% in Academe	50.5	51.4	55.0	58.0	63.1	57.9	50.9	58.9	36.6	37.1	66.9	35.0
Humanities												
Employed 1960-69 Ph.D.s	18,425	13,493	1,606	491	214	171	51	55	290	142	*	145
% in Academe	90.7	91.4	93.9	88.8	95.8	94.7	64.7	65.5	93.4	100.0	*	86.9
Employed 1970-78 Ph.D.s	34,288	27,649	2,556	1,334	603	506	67	158	869	434	94	329
% in Academe	80.2	79.4	80.2	79.2	75.8	84.0	92.5	70.9	91.6	91.2	95.7	90.9

*Population estimates based on less than 3 respondents have not been reported.

Source: 1979 Survey of Doctorate Recipients.

SOURCE: Employment of Minority Ph.D.'s: Changes Over Time by Betty M. Maxfield, National Academy of Sciences, 1981

TABLE 5-9

PERCENTAGE OF ACADEMICALLY EMPLOYED SCIENCE AND ENGINEERING PhDs BY FIELD AND RACIAL/ETHNIC CATEGORY

Ph.D. Field	Grand Total	Whites		Minorities								
				U.S.-Born					Foreign-Born			
		U.S. Born	Frgn Born	Total	Hisp	Black	Asian	Am In	Total	Hisp	Black	Asian
Total Sci/Engin Employed	295,731	231,029	27,044	6,313	1,423	2,531	1,581	778	19,516	848	638	18,007
% in Academe	53.6	53.8	56.9	60.3	61.8	58.6	59.0	65.7	43.5	39.5	70.1	42.7
EMP Employed	142,110	105,991	15,510	1,992	445	704	579	264	13,035	387	148	12,477
% in Academe	43.4	43.4	48.9	54.4	60.7	58.1	44.9	54.5	31.0	40.3	41.2	30.5
Mathematics Employed	16,035	12,137	1,620	296	89	153	23	31	1,082	53	*	985
% in Academe	76.6	75.4	80.5	80.7	95.5	80.4	82.6	38.7	76.8	88.7	*	75.1
Computer Sci Employed	1,783	1,375	144	23	*	*	*	16	170	17	*	153
% in Academe	45.3	51.3	11.8	87.0	*	*	*	81.3	28.2	11.8	*	30.1
Physics/Astronomy Employed	25,611	19,145	3,223	402	85	156	85	76	1,439	16	*	1,423
% in Academe	50.6	48.4	56.6	50.5	71.8	42.9	54.1	38.2	57.3	31.3	*	57.6
Chemistry Employed	41,970	32,356	4,784	761	138	266	272	85	2,773	168	71	2,534
% in Academe	34.1	33.6	37.4	52.2	37.7	51.5	50.4	83.5	26.0	28.0	47.9	25.3
Environmental Sci Employed	9,729	8,073	943	100	36	13	24	27	338	8	*	324
% in Academe	46.9	46.5	56.1	38.0	58.3	7.7	20.8	40.7	34.9	75.0	*	32.7
Engineering Employed	46,982	32,905	4,796	410	94	116	171	29	7,233	125	*	7,058
% in Academe	35.6	37.2	44.2	45.4	51.1	69.8	28.7	27.6	20.7	39.2	*	20.5
Life Sci Employed	70,929	56,859	5,503	1,777	400	682	500	195	4,184	269	163	3,752
% in Academe	63.6	63.5	64.3	66.5	74.0	60.6	66.4	71.8	64.1	32.3	86.5	65.4
Agricultural Sci Employed	13,430	11,046	795	244	67	53	65	59	914	74	59	781
% in Academe	57.3	57.3	50.4	78.3	68.7	90.6	95.4	59.3	56.9	58.1	79.7	55.1
Medical Sci Employed	7,949	5,929	754	278	94	120	46	18	647	28	18	601
% in Academe	56.5	56.8	55.4	57.9	55.3	57.5	63.0	61.1	55.5	42.9	100.0	54.7
Biological Sci Employed	49,550	39,884	3,954	1,255	239	509	389	118	2,623	167	86	2,370
% in Academe	66.4	66.3	68.7	66.1	82.8	58.2	62.0	79.7	68.7	19.2	88.4	71.5
Behavioral Sci Employed	82,692	68,179	6,031	2,544	578	1,145	502	319	2,297	192	327	1,778
% in Academe	62.7	61.8	70.6	60.7	54.3	57.8	67.7	71.2	76.9	47.9	74.9	80.4
Psychology Employed	36,600	31,382	2,050	1,192	260	559	242	131	296	113	18	165
% in Academe	48.0	47.9	50.4	50.3	39.6	48.1	58.3	65.6	53.4	54.9	44.4	53.3
Social Sci Employed	46,092	36,797	3,981	1,352	318	586	260	188	2,001	79	309	1,613
% in Academe	74.4	73.7	81.0	69.8	66.4	67.1	76.5	75.0	80.4	38.0	76.7	83.1

*Population estimates based on less than 3 respondents have not been reported.

Source: 1979 Survey of Doctorate Recipients.

SOURCE: Employment of Minority Ph.D.'s: Changes Over Time by Betty D. Maxfield, National Academy of Sciences, 1981

TABLE 5-10

PERCENTAGE OF ACADEMICALLY EMPLOYED HUMANITIES DOCTORATES BY FIELD AND RACIAL/ETHNIC CATEGORY, 1979

Ph.D. Field	Grand Total	Whites		Minorities								
		U.S. Born	Frgn Born	U.S.-Born					Foreign-Born			
				Total	Hisp	Black	Asian	Am In	Total	Hisp	Black	Asian
Total Humanities Employed	62,896	48,068	4,882	2,103	920	795	127	261	1,263	632	97	522
% in Academe	84.0	83.7	86.9	81.6	82.2	84.8	81.9	69.3	91.3	93.5	95.9	87.7
History Employed	16,258	13,120	810	464	175	225	13	51	150	22	38	90
% in Academe	78.5	77.3	95.7	81.3	89.1	84.4	100.0	35.3	100.0	100.0	100.0	100.0
English Employed	17,653	14,865	595	462	274	156	19	13	93	*	17	60
% in Academe	87.1	87.7	68.2	81.0	75.9	89.1	84.2	84.6	93.5	*	100.0	90.0
Total Languages Employed	12,505	7,327	2,514	607	404	113	39	51	683	529	14	139
% in Academe	85.5	84.5	87.0	84.3	85.1	86.7	48.7	100.0	90.8	93.6	71.4	87.7
Classics Employed	1,530	1,108	189	38	*	13	*	*	*	*	*	*
% in Academe	77.3	79.5	64.0	50.0	*	100.0	*	*	*	*	*	*
Modern Languages Employed	10,975	6,219	2,325	569	396	100	28	45	676	529	14	132
% in Academe	86.7	85.4	88.9	86.6	86.9	85.0	67.9	100.0	90.7	93.6	71.4	81.8
Other Humanities Employed	16,480	12,756	963	570	67	301	56	146	337	76	28	233
% in Academe	85.0	85.3	90.8	79.3	71.6	82.1	100.0	69.2	87.8	90.8	100.0	85.4
Art History Employed	1,535	1,201	131	19	*	*	*	10	31	*	*	21
% in Academe	83.5	83.7	87.8	47.4	*	*	*	40.0	90.3	*	*	100.0
Music Employed	4,043	3,412	114	188	14	117	18	39	36	9	*	21
% in Academe	84.1	83.9	91.2	80.3	57.1	77.8	100.0	87.2	63.9	66.7	*	52.4
Speech/Theater Employed	3,689	2,891	121	123	*	79	*	38	11	*	*	*
% in Academe	86.3	87.1	100.0	95.9	*	93.7	*	100.0	100.0	*	*	*
Philosophy Employed	5,187	3,939	337	110	8	24	27	51	159	34	21	104
% in Academe	84.1	85.0	87.5	60.9	100.0	54.2	100.0	37.3	89.9	97.1	100.0	85.6
Other Fields Employed	2,026	1,313	260	130	43	71	*	8	100	23	*	77
% in Academe	88.2	87.5	91.9	82.3	69.8	89.5	*	75.0	91.0	100.0	*	88.3

*Population estimates based on less than 3 respondents have not been reported.

Source: 1979 Survey of Doctorate Recipients.

SOURCE: Employment of Minority Ph.D.'s: Changes Over Time by Betty D. Maxfield, National Academy of Sciences, 1981

TABLE 5-11

PRIMARY WORK ACTIVITY OF ACADEMICALLY EMPLOYED DOCTORATES, BY RACIAL/ETHNIC CATEGORY, 1979

Primary Work Activity	Grand Total	Whites		Minorities								
				U.S.-Born					Foreign-Born			
		U.S. Born	Frgn Born	Total	Hisp	Black	Asian	Am In	Total	Hisp	Black	Asian
Science/Engineering												
Academically Empl	158,578	124,289	15,375	3,807	880	1,484	932	511	8,488	335	447	7,683
Percentage in:												
Teaching	54.8	55.6	50.4	52.7	51.6	55.6	47.5	55.6	55.5	63.9	70.9	54.4
Research/Dvlp/Design	24.8	23.4	31.4	23.9	29.7	15.0	33.3	23.1	29.9	28.1	6.7	31.1
Management/Admin	15.6	16.2	13.1	17.4	16.9	19.4	16.5	13.7	12.6	5.4	22.4	12.4
of R&D	4.9	4.8	4.9	7.4	9.3	6.1	10.1	3.3	6.6	4.2	0.9	7.1
of Educ. Programs	9.4	9.9	7.4	7.9	6.6	8.6	6.4	10.4	5.8	1.2	21.5	5.1
of Other	1.3	1.5	0.8	2.1	1.0	4.7	0.0	0.0	0.1	0.0	0.0	0.1
Consulting/Prof. Svcs	1.9	1.9	1.7	3.1	1.4	4.9	1.1	4.7	1.2	2.7	0.0	1.2
Writing/Editing	1.3	1.4	1.4	1.1	0.5	1.0	1.0	2.5	0.0	0.0	0.0	0.0
Mktg/Prod/Insp	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.2	0.0	0.0	0.2
Other	0.7	0.7	0.8	0.7	0.0	1.3	0.6	0.0	0.4	0.0	0.0	0.5
No Report	0.7	0.6	1.2	1.1	0.0	2.7	0.0	0.4	0.2	0.0	0.0	0.2
Humanities												
Academically Empl	52,853	40,247	4,243	1,715	756	674	104	181	1,153	591	93	458
Percentage in:												
Teaching	74.8	75.3	76.2	77.1	92.2	56.5	88.5	84.0	73.6	73.3	51.6	77.9
Research/Dvlp/Design	4.9	4.8	5.4	1.2	1.2	1.0	1.9	1.1	4.4	3.6	1.1	6.3
Management/Admin	11.7	11.3	11.1	10.3	5.0	16.2	5.8	12.7	13.9	13.7	30.1	11.1
of R&D	1.6	1.3	3.7	0.4	0.0	0.9	1.0	0.0	4.5	1.5	16.6	7.0
of Educ. Programs	8.8	8.7	6.2	9.2	4.9	14.7	4.8	9.4	6.4	11.0	2.2	1.5
of Other	1.3	1.3	1.3	0.6	0.1	0.6	0.0	1.3	2.8	1.1	2.2	0.4
Consulting/Prof. Svcs	0.8	0.9	0.1	2.4	0.3	5.5	1.9	0.0	1.0	0.7	0.0	1.5
Writing/Editing	3.4	3.5	3.0	5.8	0.8	12.9	1.9	2.2	3.5	4.6	7.5	1.3
Mktg/Prod/Insp	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other	1.9	2.0	1.3	1.0	0.3	2.2	0.0	0.0	0.0	0.0	0.0	0.0
No Report	2.4	2.2	2.9	2.3	0.3	5.6	0.0	0.0	3.6	4.2	9.7	1.7

Source: 1979 Survey of Doctorate Recipients.

SOURCE: Science, Engineering, and Humanities Doctorates in the United States, 1981 Profile, National Academy of Sciences/National Research Council, 1982

TABLE 5-12

TENURE STATUS OF ACADEMICALLY-EMPLOYED DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD OF PH.D, AGE AND SEX, 1981

	Field of Doctorate/Sex							
	All Fields		EMP		Life Sciences		Behav/Soc Sci	
Age and Tenure Status	M	F	M	F	M	F	M	F
Total Academically Employed (N)	157,000	24,200	63,600	3,600	45,900	9,000	47,500	11,600
Tenured	64.6	37.6	65.3	39.8	60.1	29.6	67.9	43.1
Not Tenured	29.1	51.7	25.6	50.2	34.2	58.7	28.6	46.8
Tenure Track	**15.9**	**22.8**	**13.5**	**21.2**	**17.3**	**19.4**	**17.6**	**25.9**
Non-Tenure Track	**13.2**	**28.9**	**12.1**	**29.1**	**16.9**	**39.3**	**11.0**	**20.8**
No Report	6.4	10.7	9.1	9.9	5.6	11.7	3.5	10.1
Age - 35 or Under (N)	31,200	7,700	11,300	1,000	10,400	3,000	9,500	3,700
Tenured	13.3	9.4	12.9	10.1	9.0	4.3	18.5	13.3
Not Tenured	77.2	77.6	76.5	80.6	79.4	80.6	75.6	74.4
Tenure Track	**46.8**	**37.2**	**47.0**	**41.1**	**40.3**	**24.3**	**53.6**	**46.6**
Non-Tenure Track	**30.5**	**40.4**	**29.5**	**39.5**	**39.1**	**56.3**	**22.9**	**27.8**
No Report	9.5	13.0	10.7	9.2	11.6	15.1	5.8	12.4
Age - 36 to 45 (N)	60,800	9,200	26,100	1,500	17,200	3,300	17,500	4,400
Tenured	66.5	41.0	68.3	40.9	60.0	30.7	70.4	48.8
Not Tenured	26.5	48.6	22.2	48.6	34.2	58.7	25.5	40.9
Tenure Track	**14.3**	**21.7**	**10.7**	**18.1**	**19.5**	**23.3**	**14.7**	**21.6**
Non-Tenure Track	**12.2**	**26.9**	**11.5**	**30.5**	**14.7**	**35.3**	**10.9**	**19.3**
No Report	6.9	10.4	9.6	10.5	5.8	10.6	4.1	10.3
Age - 46 or Older (N)	65,000	7,300	26,200	1,100	18,300	2,700	20,500	3,500
Tenured	87.3	63.4	84.9	66.0	89.3	56.6	88.7	67.7
Not Tenured	8.3	28.1	7.2	24.3	8.6	34.3	9.5	24.7
Tenure Track	**2.5**	**8.9**	**1.9**	**6.6**	**2.3**	**9.1**	**3.5**	**9.4**
Non-Tenure Track	**5.8**	**19.3**	**5.3**	**17.6**	**6.3**	**25.1**	**6.0**	**15.3**
No Report	4.4	8.5	7.9	9.7	2.1	9.1	1.9	7.5

NOTE: EMP = Engineering, Mathematics, Computer Sciences, Physics/Astronomy, Chemistry and Earth/Environmental Sciences.
Life Sciences = Agricultural Sciences, Medical Sciences, and Biological Sciences.
Behav/Soc Sci = Psychology and Social Sciences.

TABLE 5-13

TENURE STATUS OF PH.D.'S IN THE HUMANITIES BY FIELD OF PH.D., AGE, AND SEX, 1981

	Field of Doctorate/Sex									
	All Fields		Eng/Amer Lit		History		Other Lang		Other Humn	
Age and Tenure Status	M	F	M	F	M	F	M	F	M	F
Total Academically Employed (N)	42,200	14,500	11,200	5,100	12,300	2,200	7,400	4,300	11,300	2,900
Tenured	76.0	49.8	78.2	51.4	77.5	47.4	77.2	49.2	71.5	49.9
Not Tenured	20.3	43.4	19.0	40.6	18.3	44.4	19.7	45.8	24.1	44.4
Tenure Track	**11.8**	**21.6**	**11.2**	**19.8**	**8.8**	**17.6**	**14.2**	**24.4**	**14.0**	**23.8**
Non-Tenure Track	**8.5**	**21.8**	**7.8**	**20.8**	**9.6**	**26.8**	**5.5**	**21.4**	**10.1**	**20.6**
No Report	3.7	6.7	2.8	8.0	4.2	8.2	3.1	5.1	4.4	5.8
Age - 35 or Under (N)	4,100	2,500	1,100	700	1,000	400	700	900	1,300	500
Tenured	16.6	13.4	21.9	16.2	13.2	9.7	10.7	11.3	18.2	15.5
Not Tenured	73.0	82.7	68.8	79.0	75.9	86.5	82.9	86.2	68.7	79.4
Tenure Track	**51.7**	**50.8**	**51.4**	**48.7**	**45.9**	**42.7**	**62.1**	**55.2**	**50.2**	**51.4**
Non-Tenure Track	**21.4**	**32.0**	**17.4**	**30.3**	**30.0**	**43.8**	**20.8**	**31.0**	**18.5**	**28.0**
No Report	10.4	3.9	9.3	4.8	10.9	3.7	6.4	2.5	13.1	5.1
Age - 36 to 45 (N)	17,700	5,900	5,000	2,100	5,100	900	3,200	1,800	4,400	1,100
Tenured	73.5	45.7	77.3	48.1	72.0	46.4	76.8	44.4	68.5	42.7
Not Tenured	22.6	46.9	19.5	45.0	22.6	44.5	19.5	46.5	28.3	53.3
Tenure Track	**12.5**	**22.5**	**11.3**	**18.5**	**10.1**	**16.3**	**14.2**	**25.6**	**15.4**	**29.9**
Non-Tenure Track	**10.1**	**24.5**	**8.2**	**26.6**	**12.6**	**28.2**	**5.3**	**20.9**	**12.9**	**23.4**
No Report	3.9	7.3	3.2	6.9	5.4	9.1	3.7	9.1	3.2	
Age - 46 or Older (N)	20,400	6,100	5,100	2,300	6,200	900	3,500	1,600	5,6[illegible]	[illegible]
Tenured	90.2	68.7	91.0	65.7	92.2	62.4	91.7	75.3	86	6.2
Non Tenured	7.7	24.0	8.0	24.3	5.7	28.4	6.4	22.5	10.4	22.2
Tenure Track	**3.1**	**8.8**	**2.7**	**11.7**	**1.8**	**9.3**	**4.0**	**5.8**	**4.4**	**7.1**
Non-Tenure Track	**4.5**	**15.2**	**5.3**	**12.6**	**3.9**	**19.1**	**2.4**	**16.7**	**6.0**	**15.1**
No Report	2.1	7.3	1.0	10.0	2.1	9.2	1.9	2.2	3.2	7.6

SOURCE: Employment of Minority Ph.D.'s: Changes Over Time by Betty D. Maxfield, National Academy of Sciences, 1981

TABLE 5-14

TENURE STATUS OF ACADEMICALLY EMPLOYED DOCTORATES BY YEAR OF PhD AND RACIAL/ ETHNIC CATEGORY, 1979

Tenure Status by Year of Ph.D.	Grand Total	Whites		Minorities								
				U.S.-Born					Foreign-Born			
		U.S. Born	Frgn Born	Total	Hisp	Black	Asian	Am In	Total	Hisp	Black	Asian
Science/Engineering												
Total 1960-78 Ph.D.s†	111,202	87,981	9,867	2,904	763	1,007	682	452	6,273	291	332	5,627
% Tenured	62.2	61.3	66.5	57.1	58.2	45.1	63.0	73.0	61.8	42.6	52.7	63.6
% Not Tenured-In Track	24.1	25.1	19.1	28.2	28.6	36.8	22.0	17.9	20.9	38.8	44.0	18.3
% Not In Track	13.7	13.5	14.3	14.7	13.2	18.1	15.0	9.1	17.3	18.6	3.3	18.1
Total 1960-69 Ph.D.s	52,044	39,816	5,664	1,153	264	237	417	235	2,958	89	68	2,801
% Tenured	87.6	87.6	86.1	89.9	95.5	82.7	85.9	97.9	87.5	96.6	100.0	86.9
% Not Tenured-In Track	5.1	5.1	5.9	0.0	0.0	0.0	0.0	0.0	4.8	0.0	0.0	5.0
% Not In Track	7.3	7.2	7.9	10.1	4.5	17.3	14.1	2.1	7.7	3.4	0.0	8.1
Total 1970-78 Ph.D.s	59,158	48,165	4,203	1,751	499	770	265	217	3,315	202	264	2,826
% Tenured	39.9	39.6	40.2	35.5	38.5	33.5	27.2	46.1	38.8	18.8	40.5	40.4
% Not Tenured-In Track	40.8	41.6	36.9	46.8	43.7	48.2	56.6	37.3	35.3	55.9	55.3	31.5
% Not In Track	19.3	18.7	23.0	17.6	17.8	18.3	16.2	16.6	25.9	25.2	4.2	28.1
Humanities												
Total 1960-78 Ph.D.s	41,238	32,090	3,294	1,377	631	523	81	142	982	476	83	412
% Tenured	67.9	66.5	70.1	59.8	60.4	60.4	60.5	54.2	63.0	69.7	41.0	61.4
% Not Tenured-In Track	18.8	19.8	17.1	29.4	26.1	32.1	34.6	31.0	22.5	19.5	43.4	21.1
% Not In Track	13.3	13.7	12.9	10.8	13.5	7.5	4.9	14.8	14.5	10.7	15.7	17.5
Total 1960-69 Ph.D.s	16,183	11,961	1,478	431	205	157	33	36	271	142	*	126
% Tenured	92.8	92.6	93.6	90.7	87.3	91.1	100.0	100.0	98.2	96.5	*	100.0
% Not Tenured-In Track	3.3	3.3	4.5	9.3	12.7	8.9	0.0	0.0	1.8	3.5	*	0.0
% Not In Track	3.9	4.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*	0.0
Total 1970-78 Ph.D.s	25,055	20,129	1,816	946	426	366	48	106	711	334	80	286
% Tenured	51.8	51.0	50.9	45.7	47.4	47.3	33.3	38.7	49.6	58.4	38.8	44.4
% Not Tenured-In Track	28.9	29.6	27.3	38.6	32.6	42.1	58.3	41.5	30.4	26.3	45.0	30.4
% Not In Track	19.3	19.4	21.8	15.8	20.0	10.7	8.3	19.8	20.0	15.3	16.3	25.2

*Population estimates based on less than 3 respondents have not been reported.
†Totals include only those individuals academically-employed who reported tenure status.

Source: 1979 Survey of Doctorate Recipients.

SOURCE: National Center for Education Statistics, Preliminary Releases and Unpublished Data

TABLE 5-15

PERCENT OF FACULTY MEMBERS WITH TENURE, 1977-78 TO 1981-82

	ALL INSTITUTIONS				UNIVERSITIES				OTHER FOUR-YEAR INSTITUTIONS				TWO-YEAR INSTITUTIONS			
	1977-78	1978-79	1979-80	1981-82	1977-78	1978-79	1979-80	1981-82	1977-78	1978-79	1979-80	1981-82	1977-78	1978-79	1979-80	1981-82
Professors	95.8	95.8	96.0	93.3	96.8	96.7	96.9	96.1	94.9	94.6	94.9	91.4	97.3	94.9	95.9	88.3
Men	95.9	95.9	96.2	93.6	96.9	96.8	97.0	96.3	95.0	94.7	95.1	91.5	97.1	95.2	95.8	88.6
Women	94.8	94.9	94.4	91.1	95.2	94.9	95.4	94.6	94.3	94.3	93.4	90.3	98.1	93.9	96.2	87.5
Associate Professors	82.5	82.7	82.9	79.8	82.8	83.1	83.9	82.9	80.9	81.5	81.2	77.2	92.8	87.6	89.0	83.1
Men	82.7	83.0	83.3	80.0	83.1	83.3	84.1	82.9	81.2	82.0	81.7	77.4	92.8	88.5	89.4	83.8
Women	81.8	81.8	81.5	79.0	80.5	82.0	82.7	82.7	80.0	79.5	79.2	76.4	92.7	85.5	88.0	81.7
Assistant Professors	31.0	29.1	28.9	26.1	17.6	17.7	18.0	14.4	32.2	32.4	31.5	27.7	61.6	55.4	57.3	53.4
Men	29.7	27.8	27.5	24.9	16.1	16.2	16.2	12.9	31.4	31.6	30.9	27.1	63.4	57.3	58.6	55.4
Women	33.7	31.9	31.7	28.4	21.3	21.5	22.2	17.8	33.8	34.0	32.7	28.7	58.7	52.2	55.3	50.6
Instructors	10.0	9.5	10.2	8.2	5.2	6.3	6.5	4.8	8.5	8.4	7.9	6.3	19.4	17.7	22.8	16.4
Men	10.4	10.2	10.8	8.6	5.0	6.1	6.4	4.7	8.7	8.9	8.3	6.3	20.7	20.0	24.8	18.5
Women	9.6	8.8	9.6	7.7	5.4	6.5	6.5	4.9	8.3	7.9	7.6	6.3	18.0	15.3	20.8	14.4
Lecturers	3.0	2.3	5.9	10.6	4.5	3.2	8.6	3.6	0.8	0.6	0.8	15.4	3.3	5.1	5.7	30.0
Men	3.8	2.9	6.7	10.6	5.2	3.8	9.4	4.7	1.3	1.0	1.1	14.6	6.7	6.1	10.3	30.4
Women	2.0	1.6	4.9	10.6	3.4	2.4	7.6	2.3	0.2	0.2	0.4	16.4	1.1	4.4	2.4	29.6
No Academic Rank	73.4	75.6	76.3	47.4	1.3	1.1	1.2	0.9	30.9	28.7	28.0	14.5	75.9	80.0	81.0	50.4
Men	77.0	78.9	79.1	50.3	1.9	1.7	1.8	1.6	33.3	31.7	30.2	15.7	79.7	83.3	83.3	53.5
Women	66.2	68.8	70.7	42.4	0.0	0.0	0.0	0.0	28.4	23.4	24.2	12.1	68.4	73.3	73.3	45.0
All Academic Ranks	62.7	62.7	63.6	59.1	62.4	63.4	64.4	64.2	59.9	59.1	59.5	58.0	70.8	71.1	73.3	54.4
Men	67.5	67.8	68.7	64.6	67.7	68.7	69.7	69.7	64.9	64.6	65.3	63.4	75.3	75.7	77.2	58.2
Women	48.2	46.8	48.0	44.1	38.3	40.0	41.7	41.0	45.2	43.8	43.8	43.1	62.4	62.5	65.8	47.9

Note: 1977-78 figures based on a 67% response, 1978-79 and 1979-80 figures based on a 70.3% response.

SOURCE: National Center for Education Statistics, Unpublished

TABLE 5-16

NUMBER OF FULL-TIME INSTRUCTIONAL FACULTY AND PERCENT TENURED BY SEX, ACADEMIC RANK AND CONTROL OF INSTITUTION, 1981-82

	Number of Faculty Members			Percent with Tenure		
	Men	Women	Total	Men	Women	Total
Public Universities						
Professors	32,970	2,171	35,141	96.4	94.7	96.3
Associate Professors	21,594	4,373	25,967	85.6	86.2	85.7
Assistant Professors	15,798	6,881	22,679	14.0	20.4	15.9
Instructors	2,114	2,543	4,657	5.2	5.5	5.4
Lecturers	1,347	1,140	2,487	5.3	2.5	4.0
No Academic Rank	306	195	501	2.0	0.0	1.2
All Ranks Combined	74,129	17,303	91,432	71.1	42.8	65.7
Private Universities						
Professors	11,931	842	12,773	95.7	94.4	95.7
Associate Professors	7,303	1,730	9,033	75.2	73.7	74.9
Assistant Professors	6,303	2,943	9,246	10.2	11.6	10.6
Instructors	782	807	1,589	3.5	3.1	3.3
Lecturers	312	281	593	1.9	1.4	1.7
No Academic Rank	77	67	144	0.0	0.0	0.0
All Ranks Combined	26,708	6,670	33,378	65.8	36.6	60.0
Other Public 4-Yr Institutions						
Professors	30,847	4,340	35,187	95.0	94.7	95.0
Associate Professors	26,914	7,241	34,155	82.4	82.1	82.4
Assistant Professors	19,778	11,743	31,521	34.0	36.0	34.7
Instructors	4,661	5,317	9,978	9.2	9.1	9.2
Lecturers	1,321	1,148	2,460	17.6	19.4	18.5
No Academic Rank	532	343	875	19.0	10.8	15.8
All Ranks Combined	84,044	30,132	114,176	70.2	49.9	64.8
Other Private 4-Yr Institutions						
Professors	16,645	2,425	19,070	85.1	82.6	84.8
Associate Professors	14,941	4,369	19,310	68.3	66.8	68.0
Assistant Professors	13,662	8,120	21,782	17.1	18.1	17.5
Instructors	3,825	3,878	7,703	2.7	2.6	2.6
Lecturers	308	221	529	1.6	0.5	1.1
No Academic Rank	2,337	1,046	3,383	15.0	12.5	14.2
All Ranks Combined	51,718	20,059	71,777	52.5	33.0	47.1
Public 2-Yr Institutions						
Professors	4,697	1,398	6,095	90.6	90.3	90.5
Associate Professors	6,370	2,958	9,328	85.2	83.5	84.7
Assistant Professors	5,953	4,099	10,052	57.5	53.2	55.7
Instructors	2,893	3,032	5,925	19.6	15.4	17.4
Lecturers	158	199	357	31.0	30.7	30.8
No Academic Rank	34,160	19,163	53,323	56.0	48.2	53.2
All Ranks Combined	54,231	30,849	85,080	60.6	50.8	57.0
Private 2-Yr Institutions						
Professors	235	93	328	48.9	45.2	47.9
Associate Professors	246	150	396	45.9	46.0	46.0
Assistant Professors	336	296	632	17.0	15.5	16.3
Instructors	261	308	569	6.5	5.2	5.8
Lecturers	3	7	10	0.0	0.0	0.0
No Academic Rank	2,110	1,688	3,798	13.2	9.0	11.3
All Ranks Combined	3,191	2,542	5,733	18.2	12.8	15.8
All Institutions, Public & Private						
Professors	97,325	11,269	108,594	93.6	91.1	93.3
Associate Professors	77,368	20,821	98,189	80.0	79.0	79.8
Assistant Professors	61,830	34,082	95,912	24.9	28.4	26.1
Instructors	14,536	15,885	30,421	8.6	7.7	8.2
Lecturers	3,440	2,996	6,436	10.6	10.6	10.6
No Academic Rank	39,522	22,502	62,024	50.3	42.4	47.4
All Ranks Combined	294,021	107,555	401,576	64.6	44.1	59.1

Note: Includes only institutions reporting tenured faculty members.

SOURCE: Manpower Resources for Scientific Activities at Universities and Colleges, January 1977, Detailed Statistical Tables, Appendix B, NSF 77-321; Human Resources for Scientific Activities at Universities and Colleges, January 1980, NSF 81-307; and Unpublished Data, January 1981, National Science Foundation

TABLE 5-17

NUMBER AND PERCENT OF SCIENTISTS AND ENGINEERS EMPLOYED FULL TIME IN COLLEGES AND UNIVERSITIES BY FIELD AND SEX, SELECTED YEARS, JANUARY 1974 - 1981

FIELD	1974			1976			1978			1980			1982		
	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W
ENGINEERS, TOTAL	22,764	339	1.5	22,928	440	1.9	24,601	593	2.4	26,525	707	2.7	27,979	805	2.9
Aero. & Astro.	1,023	22	2.1	993	30	3.0	965	18	1.9	1,144	27	2.4	1,084	22	2.0
Chemical	1,522	22	1.4	1,637	37	2.3	1,726	32	1.9	1,893	59	3.1	1,884	69	3.7
Civil	3,759	61	1.6	4,007	82	2.0	4,192	125	3.0	6,225	115	1.8	4,703	133	2.8
Electrical	5,404	57	1.1	5,414	74	1.4	5,594	92	1.6	6,398	112	1.8	6,800	125	1.8
Mechanical	4,255	33	0.8	4,352	45	1.0	4,543	61	1.3	4,809	90	1.9	5,108	112	2.2
Other	6,801	144	2.1	6,525	181	2.8	7,581	265	3.5	7,949	304	3.8	8,400	344	4.1
PHYSICAL SCI., TOTAL	26,849	1,939	7.2	27,172	2,115	7.8	27,861	2,443	8.8	28,101	2,500	8.9	28,435	2,598	9.1
Chemists	14,075	1,385	9.8	14,199	1,518	10.7	14,711	1,724	11.7	14,392	1,784	12.4	1,058	79	7.5
Physicists	10,870	395	3.6	10,862	396	3.6	11,272	478	4.2	11,417	498	4.4	14,774	1,872	12.7
Astronomers										826	68	8.2	11,132	489	4.4
Other Physical Sci.	1,904	159	8.4	2,111	201	9.5	1,878	241	12.8	1,466	152	10.4	1,471	158	10.7
ENVIRONMENTAL SCI., TOTAL	6,563	327	5.0	7,259	389	5.4	8,109	560	6.9	8,336	660	7.9	8,505	746	8.8
Earth Scientists	4,957	229	4.6	5,586	289	5.2	5,920	404	6.8	5,556	398	7.2	761	50	6.6
Atmospheric Scientists	571	39	6.8	583	33	5.7	801	35	4.4	793	44	5.6	5,640	426	7.6
Oceanographers	1,035	59	5.7	1,090	67	6.1	1,388	121	8.7	1,386	127	9.1	1,357	162	11.9
Other Environ. Sci.										601	91	15.1	747	108	14.5
MATH & COMPUTER SCI., TOTAL	22,260	2,925	13.1	23,124	3,102	13.4	24,317	3,463	14.2	26,047	4,095	15.6	27,912	4,451	15.9
Mathematicians	18,532	2,479	13.4	18,998	2,622	13.8	19,545	2,905	14.9	19,916	3,188	16.0	20,367	3,326	16.3
Computer Scientists*	3,728	446	12.0	4,126	480	11.6	4,772	558	11.7	6,131	907	14.8	7,545	1,125	14.9
LIFE SCIENTISTS, TOTAL	88,801	18,045	20.3	92,015	18,204	19.8	97,238	19,771	20.3	108,114	24,065	22.3	112,353	25,800	23.0
Agricultural Sci.	12,785	1,550	12.1	12,500	1,051	8.4	13,594	1,219	9.0	14,432	1,325	9.2	14,596	1,357	9.3
Biological Sci.	32,142	6,319	19.7	34,886	7,043	20.2	37,442	7,767	20.7	38,725	8,219	21.2	39,796	8,744	22.0
Medical Scientists	43,874	10,176	23.2	44,629	10,110	22.7	46,202	10,785	23.3	50,316	11,717	23.3	52,257	12,487	23.9
Other Life Scientists										4,641	2,804	60.4	5,704	3,212	56.3
PSYCHOLOGISTS, TOTAL	14,957	3,188	21.3	16,817	3,996	23.8	17,362	4,301	24.8	16,756	4,326	25.8	16,767	4,450	26.5
SOCIAL SCIENTISTS, TOTAL	36,620	5,768	15.8	40,898	7,224	17.7	41,611	7,555	18.2	41,296	7,847	19.0	41,638	8,109	19.5
Economists	9,830	788	8.0	10,429	946	9.1	10,761	964	9.0	11,118	1,110	10.0	11,402	1,198	10.5
Sociologists	10,048	2,376	23.6	11,440	2,930	25.6	11,449	3,019	26.4	10,850	2,947	27.1	9,187	1,283	14.0
Political Scientists	8,396	863	10.3	9,058	1,031	11.4	9,026	1,076	11.9	8,840	1,119	12.7	10,779	3,038	28.2
Other Social Scientists	8,346	1,741	20.9	9,971	2,317	23.2	10,375	2,496	24.1	10,479	2,671	25.5	10,270	2,590	25.2
TOTAL	218,407	32,124	14.7	230,213	35,479	15.4	241,099	38,686	16.0	254,861	44,164	17.3	267,063	50,433	18.9

* Excluding Programmers.

SOURCE; Graduate Science Education Student Support and Postdoctorals, Fall 1981, National Science Foundation, in press.

TABLE 5-18

SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY FIELD, EMPLOYMENT STATUS AND SEX, JANUARY 1980-1982

FIELD OF EMPLOYMENT	MALE						FEMALE					
	FULL TIME			PART TIME			FULL TIME			PART TIME		
	1980	1981	1982	1980	1981	1982	1980	1981	1982	1980	1981	1982
TOTAL	210,673	212,918	216,630	51,802	55,612	60,727	44,197	46,626	50,433	17,431	19,161	20,981
ENGINEERS	25,759	26,201	27,174	6,987	7,477	8,001	713	805	875	278	347	369
AEROMAUTICAL AND ASTRONAUTICAL ENGINEERS	1,117	1,035	1,062	248	196	230	27	22	21	15	9	10
CHEMICAL ENGINEERS	1,827	1,833	1,815	445	348	337	59	69	96	21	33	36
CIVIL ENGINEERS	4,207	4,314	4,570	1,167	1,224	1,298	118	133	166	37	46	66
ELECTRICAL ENGINEERS	6,260	6,394	6,675	1,751	2,014	2,152	114	125	136	29	51	61
MECHANICAL ENGINEERS	4,725	4,820	4,996	1,228	1,343	1,507	92	112	98	29	48	51
OTHER ENGINEERS	7,623	7,805	8,056	2,148	2,352	2,477	303	344	358	147	160	145
PHYSICAL SCIENTISTS	25,502	25,582	25,837	4,237	4,546	4,565	2,491	2,598	2,668	1,324	1,345	1,307
ASTRONOMERS	750	821	979	117	139	166	68	79	81	20	26	31
CHEMISTS	12,551	12,895	12,902	2,345	2,307	2,390	1,779	1,872	1,898	1,039	1,015	971
PHYSICISTS	10,831	10,521	10,643	1,524	1,711	1,640	492	489	511	160	193	190
OTHER PHYSICAL SCIENTISTS	1,370	1,345	1,313	351	389	369	152	158	178	105	111	115
ENVIRONMENTAL SCIENTISTS	7,673	7,817	7,759	1,193	1,167	1,168	660	746	809	285	311	323
ATMOSPHERIC SCIENTISTS	749	713	711	136	135	114	44	50	50	14	20	10
EARTH SCIENTISTS	5,156	5,212	5,214	832	809	795	398	426	456	183	187	215
OCEANOGRAPHERS	1,258	1,305	1,195	113	99	100	127	162	199	40	43	29
OTHER ENVIRONMENTAL SCIENTISTS	510	587	639	115	124	159	91	108	104	48	61	69
MATHEMATICAL AND COMPUTER SCIENTISTS	21,945	22,677	23,461	7,120	8,539	10,044	4,085	4,451	4,861	2,807	3,320	3,773
MATHEMATICIANS	16,738	16,908	17,041	4,725	5,579	6,257	3,176	3,326	3,518	2,440	2,767	3,067
COMPUTER SCIENTISTS	5,207	5,769	6,420	2,395	2,960	3,787	909	1,125	1,343	367	553	706
LIFE SCIENTISTS	84,054	84,762	86,553	19,018	19,852	22,520	24,101	25,800	28,661	6,529	7,363	8,502
AGRICULTURAL SCIENTISTS	13,113	13,210	13,239	1,172	1,268	1,406	1,327	1,357	1,477	287	293	377
BIOLOGICAL SCIENTISTS	30,497	31,174	31,052	3,804	4,038	4,094	8,217	8,744	9,123	2,285	2,400	2,509
MEDICAL SCIENTISTS	38,601	38,352	39,770	13,483	13,924	16,148	11,715	12,487	13,239	3,317	3,873	4,358
OTHER LIFE SCIENTISTS	1,843	2,026	2,492	559	522	872	2,842	3,212	4,822	640	797	1,258
PSYCHOLOGISTS	12,415	12,427	12,317	3,844	3,899	4,125	4,318	4,410	4,450	2,680	2,627	2,772
SOCIAL SCIENTISTS	33,325	33,452	33,529	9,400	10,132	10,304	7,829	7,816	8,109	3,528	3,848	3,935
ECONOMISTS	9,982	10,112	10,204	3,049	3,311	3,440	1,110	1,120	1,198	531	536	552
POLITICAL SCIENTISTS	7,655	7,838	7,904	1,934	2,041	2,113	1,112	1,157	1,283	493	532	546
SOCIOLOGISTS	7,920	7,792	7,741	2,221	2,363	2,335	2,940	2,960	3,038	1,420	1,580	1,544
OTHER SOCIAL SCIENTISTS	7,768	7,710	7,680	2,196	2,417	2,416	2,667	2,579	2,590	1,084	1,200	1,293

SOURCE: Academic Science: Scientists and Engineers, January 1981, NSF 82-305

TABLE 5-19

SCIENTISTS AND ENGINEERS EMPLOYED AT UNIVERSITIES AND COLLEGES BY EMPLOYMENT STATUS, TYPE OF INSTITUTION, CONTROL AND SEX, 1981

TYPE OF INSTITUTION AND CONTROL	FULL TIME			PART TIME			% OF ALL WOMEN			% OF ALL MEN		
	Total	Women	% W	Total	Women	% W	Total	Full Time	Part Time	Total	Full Time	Part Time
ALL INSTITUTIONS	258,849	46,339	17.9	74,559	19,064	25.6	100.0	70.9	29.1	100.0	79.3	20.7
Public	180,771	32,083	17.7	49,209	13,205	26.8	69.2	49.1	20.2	68.9	55.5	13.4
Private	78,078	14,256	18.3	25,350	5,859	23.1	30.8	21.8	9.0	31.1	23.8	7.3
INSTITUTIONS GRANTING: DOCTORATE IN S/E	182,464	31,413	17.2	40,521	9,745	24.0	62.9	48.0	14.9	67.9	56.4	11.5
Public	126,129	21,603	17.1	24,773	6,700	27.0	43.2	33.0	10.2	45.7	39.0	6.7
Private	56,335	9,810	17.4	15,748	3,045	19.3	19.7	15.0	4.7	22.1	17.4	4.7
MASTER'S IN S/E	27,850	4,543	16.3	9,805	2,659	27.1	11.1	7.0	4.1	11.4	8.7	2.7
Public	21,856	3,460	15.8	6,360	1,721	27.1	8.9	5.3	2.6	8.6	6.9	1.7
Private	5,994	1,083	18.1	3,445	938	27.2	3.1	1.7	1.4	2.7	1.8	0.9
BACHELOR'S IN S/E	21,234	4,051	19.1	6,405	1,941	30.3	9.2	6.2	3.0	8.1	6.4	1.7
Public	7,098	1,129	15.9	1,354	411	30.4	2.3	1.7	0.6	2.5	2.2	0.3
Private	14,136	2,922	20.7	5,051	1,530	30.3	6.8	4.5	2.3	5.5	4.2	1.3
OTHER DEGREES	708	71	10.0	208	40	19.2	0.2	0.1	0.1	0.3	0.2	0.1
Public	449	32	7.1	71	13	18.3	*	*	*	0.2	0.2	*
Private	259	39	15.1	137	27	19.7	*	*	*	0.1	0.1	*
TWO-YEAR INSTITUTIONS	26,593	6,261	23.5	17,620	4,679	26.6	16.7	9.6	7.1	12.4	7.6	4.8
Public	25,239	5,859	23.2	16,651	4,360	26.2	15.7	9.0	6.7	11.8	7.2	4.6
Private	1,354	402	29.7	969	319	32.9	1.1	0.6	0.5	0.6	0.4	0.2

* Less than .1%

SOURCE: Academic Science: Scientists and Engineers, January 1981, NSF 82-305

TABLE 5-20

NUMBER AND PERCENT WOMEN AMONG FULL-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT TOP 25* UNIVERSITIES AND COLLEGES, BY FIELD, 1981

INSTITUTION BY RANK	Total S/E Employment	Total Women	PERCENT WOMEN							
			All S/E Fields	Engr.	Phys. Sci.	Env. Sci.	Math/ Computer Sci.	Life Sci.	Psych-ology	Social Sci.
U. Wisconsin, Madison	3,143	759	24.1	8.2	14.0	17.3	9.3	28.9	34.8	30.2
Harvard U.	3,861	694	18.0	2.3	5.4	9.5	8.6	19.2	29.6	11.8
U. Michigan	2,621	620	23.7	8.8	10.8	8.7	6.0	29.5	38.4	29.4
Louisiana State U.	2,498	590	23.6	4.8	3.1	21.7	22.6	27.3	21.2	17.6
U. Minnesota	3,081	506	16.4	1.5	4.3	9.7	6.8	18.8	25.8	18.5
U. Pittsburgh	1,703†	484†	28.4	3.3	7.7	0.0	13.8	37.5	46.2	19.7
U. Utah	1,733	444	25.6	6.1	8.7	9.3	8.5	31.9	12.5	32.2
Johns Hopkins U.	3,157	440	13.9	1.1	4.9	14.3	24.4	21.6	12.9	27.2
Yale U.	1,794	412§	23.0	5.5	4.2	3.9	9.3	27.1	35.9	16.6
Columbia U.	1,744	408	23.2	4.5	9.4	25.0	5.1	27.0	26.7	25.7
U. Washington	1,966	404	20.6	3.1	5.4	10.3	3.9	28.6	30.6	20.4
U. Kentucky	1,926	389	20.2	2.8	10.7	13.0	24.3	25.2	22.0	11.3
Cornell U.	2,331	385	16.5	4.1	5.5	10.7	12.2	18.5	40.0	21.6
U. Illinois, Urbana	2,246	381	16.9	3.9	10.1	21.3	15.3	18.7	34.7	24.4
U. Florida	2,082	371	17.8	3.1	1.2	0.0	8.7	21.2	22.7	18.3
Ohio State U.	2,050	370	18.0	4.3	4.4	11.9	8.0	24.3	18.8	18.1
U. Texas, Austin	1,699	345	20.3	9.6	9.6	24.5	15.1	33.2	26.3	30.9
Mass. Inst. Technology	2,119	343	16.2	8.5	8.3	12.4	7.7	41.2	43.1	16.1
U. Connecticut	1,293	330	25.5	6.6	6.1	9.1	12.2	29.1	33.0	34.4
Rutgers	1,527	329	21.6	1.8	15.9	10.7	18.3	17.6	32.5	19.6
U. Iowa	1,588	311	19.6	0.0	1.1	0.0	9.5	23.8	16.7	14.8
New York U.	1,425	309	21.7	0.0	8.0	0.0	11.9	23.6	32.4	22.3
Wayne State U.	1,056	303	28.7	29.0	32.0	37.5	18.9	29.4	19.4	29.1
Washington U., St. Louis	1,480	303	20.5	0.0	8.6	11.8	17.7	22.8	23.1	14.5
Duke U.	1,563	299	19.1	0.0	9.7	22.7	8.3	20.8	17.4	18.5
TOTAL, ALL SCHOOLS	258,849	46,339	17.9	3.0	9.3	8.7	16.3	23.2	26.1	19.0

* Ranked in order or number of women scientists/engineers employed.

† Estimated. § Imputed.

SOURCE: Academic Science: Scientists and Engineers, January 1981, NSF 82-305
National Science Foundation

TABLE 5-21

FULL-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT PUBLIC UNIVERSITIES AND COLLEGES BY FIELD OF SCIENCE AND SEX, 1981

INSTITUTIONAL RANKING	TOTAL, ALL FIELDS		ENGINEERS		PHYSICAL SCIENTISTS		ENVIRON-MENTAL SCIENTISTS		MATH. AND COMPUTER SCIENTISTS		LIFE SCIENTISTS		PSYCHOLOGISTS		SOCIAL SCIENTISTS	
	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN
TOTAL, ALL INSTS.	78078	14256	7237	197	9713	951	1727	202	6966	1113	35926	8232	4915	1317	11594	2244
1 HARVARD UNIVERSITY	3861	694	44	1	184	10	42	4	58	5	3327	640	54	16	152	18
2 JOHNS HOPKINS UNIVERSITY	3157	440	922	10	365	18	21	3	197	48	1496	323	31	4	125	34
3 CORNELL UNIVERSITY	2331	385	289	12	218	12	28	3	74	9	1348	249	105	42	269	58
4 MASS INST OF TECHNOLOGY	2119	343	683	58	494	41	113	14	169	13	386	159	51	22	223	36
5 YALE UNIVERSITY	1794	412	55	3	143	6	26	1	54	5	1320	357	39	14	157	26
6 COLUMBIA UNIV MAIN DIV	1744	408	112	5	128	12	192	48	39	2	1001	271	15	4	257	66
7 DUKE UNIVERSITY	1563	299	49	0	72	7	22	5	36	3	1231	256	23	4	130	24
8 UNIV OF PENNSYLVANIA	1491	224	94	2	84	3	5	0	82	8	950	164	26	4	250	43
9 WASHINGTON UNIVERSITY	1480	303	70	0	58	5	17	2	62	11	1185	270	26	6	62	9
10 NEW YORK UNIVERSITY	1425	309	27	0	75	6	0	0	118	14	952	225	74	24	179	40
TOTAL, 1ST 10 INSTS.	20965	3817	2345	91	1821	120	466	80	889	118	13196	2914	444	140	1804	354
11 UNIVERSITY OF CHICAGO	1315	243	46	1	193	14	43	4	59	3	794	197	40	9	140	15
12 UNIV OF SOUTHERN CAL	1274	196	128	2	85	7	14	0	39	1	877	165	38	6	93	15
13 CASE WESTERN RESERVE UNIV	1270	209	115	2	79	4	7	0	34	3	983	186	14	3	38	11
14 CUNY MT SINAI SCH OF MED	1192	288	27	0	27	2	4	1	19	2	1091	278	4	1	20	4
15 UNIVERSITY OF ROCHESTER	1129	177	42	2	198	3	7	0	54	3	660	143	82	20	86	6
16 STANFORD UNIVERSITY	1102	118	294	10	153	8	41	5	92	3	395	69	28	8	99	15
17 NORTHWESTERN UNIVERSITY	1091	177	156	6	124	5	14	2	112	8	478	114	68	19	139	23
18 UNIVERSITY OF MIAMI	1059	139	62	1	41	0	94	2	33	4	733	122	39	6	57	4
19 HOWARD UNIVERSITY	979	263	44	0	142	34	48	20	25	2	645	186	17	2	58	19
20 BOSTON UNIVERSITY	890	276	27	2	80	6	6	0	41	5	571	211	36	14	129	38
TOTAL, 1ST 20 INSTS.	32266	5903	3286	117	2943	203	744	114	1397	152	20423	4585	810	228	2663	504
21 YESHIVA UNIVERSITY	866	197	5	0	60	12	0	0	8	1	690	151	49	19	54	14
22 GEORGETOWN UNIVERSITY	817	202	0	0	31	2	0	0	12	0	679	182	12	2	83	16
23 EMORY UNIVERSITY	806	133	90	5	81	4	15	1	47	3	447	95	35	11	91	14
24 VANDERBILT UNIVERSITY	747	97	36	2	57	1	4	0	47	4	509	80	39	5	55	5
25 BAYLOR COL OF MEDICINE	733	129	0	0	0	0	0	0	0	0	733	129	0	0	0	0
26 GEORGE WASHINGTON UNIV	629	146	74	1	34	2	8	0	68	7	329	102	25	9	91	25
27 NEW YORK MEDICAL COLLEGE	617	135	0	0	0	0	0	0	0	0	617	135	0	0	0	0
28 BRIGHAM YOUNG UNIVERSITY	585	67	84	0	56	0	21	1	126	12	146	39	52	7	100	8
29 CALIFORNIA INST OF TECH	556	52	142	2	236	21	68	13	29	1	63	14	0	0	18	1
30 CARNEGIE-MELLON UNIV	546	84	175	10	145	21	0	0	86	7	79	32	32	10	29	4
TOTAL, 1ST 30 INSTS.	39168	7145	3892	137	3643	266	860	129	1820	187	24715	5544	1054	291	3184	591
31 TULANE UNIVERSITY	541	77	40	0	33	1	8	2	35	4	324	51	24	6	77	13
32 PRINCETON UNIVERSITY	529	81	96	2	137	11	42	8	55	3	69	25	26	8	104	24
33 ST LOUIS UNIVERSITY	514	98	22	0	24	1	13	0	17	6	366	69	19	4	53	18
34 LOMA LINDA UNIVERSITY	482	104	54	0	49	12	10	0	28	7	268	77	20	3	53	5
35 WAKE FOREST UNIVERSITY	462	45	2	0	21	0	0	0	17	1	366	31	23	8	33	5
36 SYRACUSE UNIVERSITY	437	82	80	2	49	1	7	0	59	6	71	40	64	18	107	15
37 ROCKEFELLER UNIVERSITY	401	74	0	0	39	2	0	0	14	0	314	67	34	5	0	0
38 UNIVERSITY OF DAYTON	383	27	128	1	108	7	6	2	69	5	20	5	23	3	29	4
39 BROWN UNIVERSITY	370	49	50	2	71	7	24	4	53	3	84	19	15	2	73	12
40 RENSSELAER POLYTECH INST	368	16	201	3	74	4	7	0	48	4	15	3	9	1	14	1
TOTAL, 1ST 40 INSTS.	43655	7798	4565	147	4248	312	977	145	2215	226	26612	5931	1311	349	3727	688
41 NORTHEASTERN UNIVERSITY	350	46	116	3	60	6	8	0	52	11	22	6	23	7	69	13
42 UNIVERSITY OF NOTRE DAME	347	19	81	0	104	4	6	0	34	2	41	5	19	3	62	5
43 TUFTS UNIVERSITY	347	71	37	1	32	2	3	0	28	2	183	49	19	6	45	11
44 LOYOLA UNIV - CHICAGO	334	52	0	0	25	1	0	0	18	2	204	33	35	4	52	12
45 DARTMOUTH COLLEGE	314	40	26	1	33	2	8	1	23	1	160	25	20	4	44	6
46 HAHNEMANN MED COL & HOSP	308	39	2	0	9	0	0	0	1	0	272	31	21	7	3	1
47 LONG ISLAND UNIVERSITY	303	54	0	0	48	2	16	4	44	8	88	14	34	10	73	16
48 UNIVERSITY OF DENVER	295	67	35	2	59	2	8	3	58	15	35	18	35	10	65	17
49 MARQUETTE UNIVERSITY	295	71	46	1	28	1	0	0	23	3	148	58	11	3	39	5
50 FAIRLEIGH DICKINSON UNIV	292	56	25	1	39	3	3	0	29	6	95	20	42	15	59	11
TOTAL, 1ST 50 INSTS.	46840	8313	4933	156	4685	335	1029	153	2525	276	27860	6190	1570	418	4238	785
TOTAL, ALL OTHER INSTS.	31238	5943	2304	41	5028	616	698	49	4441	837	8066	2042	3345	899	7356	1459

SOURCE: Academic Science: Scientists and Engineers, January 1981, NSF 82-305
National Science Foundation

TABLE 5-22

FULL-TIME SCIENTISTS AND ENGINEERS EMPLOYED AT PRIVATE UNIVERSITIES AND COLLEGES BY FIELD OF SCIENCE AND SEX, 1981

INSTITUTIONAL RANKING	TOTAL, ALL FIELDS		ENGINEERS		PHYSICAL SCIENTISTS		ENVIRON-MENTAL SCIENTISTS		MATH. AND COMPUTER SCIENTISTS		LIFE SCIENTISTS		PSYCHOLOGISTS		SOCIAL SCIENTISTS	
	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN	TOTAL	WOMEN
TOTAL, ALL INSTS.	180771	32083	19755	605	18460	1662	6824	540	20125	3310	74133	17323	11905	3075	29569	5568
1 UNIV OF WIS-MADISON	3143	759	294	24	279	39	202	35	193	18	1670	483	161	56	344	104
2 UNIVERSITY OF MINNESOTA	3081	506	196	3	164	7	62	6	148	10	1849	348	128	33	534	99
3 UNIVERSITY OF MICHIGAN	2621	620	388	34	241	26	69	6	116	7	1323	390	164	63	320	94
4 LOUISIANA STATE UNIV	2498	590	145	7	129	4	143	31	124	28	1793	490	33	7	131	23
5 UNIV OF ILL URBANA	2246	381	387	15	287	29	122	26	183	28	728	136	150	52	389	95
6 TEXAS A & M UNIVERSITY	2216	114	397	8	100	3	72	4	127	10	1069	31	43	7	408	51
7 UNIVERSITY OF FLORIDA	2082	371	225	7	87	1	8	0	69	4	1545	328	44	10	104	19
8 OHIO STATE UNIVERSITY	2050	370	254	11	115	5	42	5	188	15	1138	277	48	9	265	48
9 PENNSYLVANIA STATE UNIV	2048	203	602	17	193	9	80	3	185	32	720	105	76	17	192	20
10 UNIVERSITY OF WASHINGTON	1966	404	261	8	130	7	156	16	77	3	1112	318	49	15	181	37
TOTAL, 1ST 10 INSTS.	23951	4318	3149	134	1725	130	956	132	1410	157	12947	2906	896	269	2868	590
11 UNIVERSITY OF KENTUCKY	1926	389	179	5	103	11	69	9	152	37	1151	290	59	13	213	24
12 PURDUE UNIVERSITY	1742	180	448	10	219	16	26	1	174	17	588	102	88	20	199	14
13 UNIVERSITY OF UTAH	1733	444	147	9	138	12	54	5	82	7	1151	367	40	5	121	39
14 UNIVERSITY OF PITTSBURGH	1703	484	153	5	155	12	17	0	123	17	1043	391	65	30	147	29
15 UNIV OF TEXAS AT AUSTIN	1699	345	250	24	405	39	188	46	179	27	229	76	118	31	330	102
16 MICHIGAN STATE UNIVERSITY	1695	259	121	0	191	12	35	2	141	16	808	154	115	32	284	43
17 UNIVERSITY OF IOWA	1588	311	68	0	92	1	12	0	74	7	1151	274	36	6	155	23
18 N C STATE UNIV AT RALEIGH	1588	123	275	8	92	10	30	0	130	16	872	59	20	5	169	25
19 RUTGERS THE ST UNIV OF NJ	1527	329	110	2	176	28	52	6	230	42	403	71	107	34	449	146
20 UNIVERSITY OF ARIZONA	1527	231	177	1	226	8	111	6	97	11	630	148	88	20	198	37
TOTAL, 1ST 20 INSTS.	40679	7413	5077	198	3522	279	1550	207	2792	354	20973	4838	1632	465	5133	1072
21 IOWA ST U OF SCI & TECH	1482	180	329	17	64	4	17	0	141	17	752	100	51	21	128	21
22 UNIV OF CAL LOS ANGELES	1444	215	149	2	142	9	44	2	75	6	779	151	71	16	184	29
23 UNIVERSITY OF COLORADO	1382	185	137	1	193	16	76	5	74	8	645	117	66	11	191	27
24 UNIVERSITY OF CONNECTICUT	1293	330	121	8	66	4	33	3	74	9	678	197	112	37	209	72
25 UNIVERSITY OF KANSAS	1262	175	147	1	110	6	49	5	93	7	622	108	60	13	181	35
26 INDIANA UNIVERSITY	1249	267	44	5	144	13	41	0	90	12	691	191	80	12	159	34
27 UNIV OF CAL BERKELEY	1233	176	284	6	183	14	28	2	82	3	409	92	38	12	209	47
28 UNIV OF CAL DAVIS	1213	126	106	0	61	1	13	0	29	2	842	92	20	3	142	28
29 UNIV OF NC AT CHAPEL HILL	1196	176	38	1	73	2	21	1	44	1	830	135	36	7	154	29
30 UNIV OF MD COLLEGE PARK	1173	189	175	4	313	39	23	2	140	20	287	72	44	9	191	43
TOTAL, 1ST 30 INSTS.	53606	9432	6607	243	4871	387	1895	227	3634	439	27508	6093	2210	606	6881	1437
31 UNIV OF MISSOURI COLUMBIA	1158	168	106	5	51	2	26	1	52	5	799	141	42	6	82	8
32 VA POLYTECH INST & ST U	1111	77	328	8	76	3	43	3	113	20	404	27	27	4	120	12
33 TEMPLE UNIVERSITY	1099	203	26	2	46	2	17	2	97	11	656	119	98	24	159	43
34 GEORGIA INSTITUTE OF TECH	1097	63	691	27	178	6	43	7	108	15	27	1	14	1	36	4
35 UNIV ALABAMA BIRMINGHAM	1087	166	25	1	23	0	4	0	27	4	953	150	26	7	29	4
36 UNIVERSITY OF GEORGIA	1084	78	27	1	76	1	57	3	70	7	622	40	85	11	147	15
37 OREGON STATE UNIVERSITY	1071	117	123	0	89	13	134	1	74	8	561	83	12	3	78	9
38 NEW MEXICO STATE UNIV	1060	170	170	4	97	8	20	1	157	32	349	57	106	28	161	40
39 WAYNE STATE UNIVERSITY	1056	303	76	22	75	24	8	3	53	10	722	212	36	7	86	25
40 WASHINGTON STATE UNIV	1045	67	122	1	90	3	40	1	76	0	516	32	50	11	151	19
TOTAL, 1ST 40 INSTS.	64474	10844	8301	314	5672	449	2287	249	4461	551	33117	6955	2706	708	7930	1618
41 COLORADO STATE UNIVERSITY	1028	116	170	7	61	2	65	3	80	4	480	72	42	13	130	15
42 UNIV OF HAWAII-MANOA	1013	187	59	0	83	5	87	9	44	0	486	140	30	4	224	29
43 WEST VIRGINIA UNIVERSITY	1008	196	103	3	35	2	16	1	49	12	333	55	21	2	451	121
44 UNIV OF SOUTH CAROLINA	1001	238	70	1	91	13	32	3	145	20	374	159	79	16	210	26
45 VIRGINIA COMMONWLTH UNIV	1000	265	0	0	24	3	0	0	57	6	755	214	30	8	134	34
46 UNIVERSITY OF CINCINNATI	996	133	123	4	65	0	15	1	56	7	619	107	39	5	79	9
47 KANS ST U - AG & APP SCI	983	139	125	1	49	0	11	0	54	6	577	95	16	1	151	36
48 SUNY AT STONY BROOK	963	184	53	0	189	16	48	1	84	9	433	126	52	10	104	22
49 UNIV OF CAL SAN DIEGO	924	88	46	0	119	9	189	11	31	1	439	51	21	2	79	14
50 AUBURN UNIVERSITY	919	96	178	5	68	5	9	1	89	17	407	39	30	7	138	22
TOTAL, 1ST 50 INSTS.	74309	12486	9228	335	6456	504	2759	279	5150	633	38020	8013	3066	776	9630	1946
TOTAL, ALL OTHER INSTS.	106462	19597	10527	270	12004	1158	4065	261	14975	2677	36113	9310	8839	2299	19939	3622

SOURCE: NATIONAL SCIENCE FOUNDATION

SOURCE: Graduate Science Education Student Support and Postdoctorals Fall 1981, National Science Foundation, in press

TABLE 5-23

SCIENCE/ENGINEERING POSTDOCTORATES AND OTHER NONFACULTY DOCTORAL RESEARCH STAFF IN ALL GRADUATE INSTITUTIONS BY FIELD AND SEX, 1981

FIELD	Postdoctorates			Non-Faculty Doctoral Research Staff		
	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE
TOTAL, ALL FIELDS	19,655	15,563	4,092	3,552	2,805	747
ENGINEERING	1,031	952	79	506	473	33
AEROSPACE	14	12	2	8	8	0
AGRICULTURAL	9	9	0	3	2	1
BIOMEDICAL	34	28	6	4	3	1
CHEMICAL	174	162	12	75	70	5
CIVIL	103	95	8	33	26	7
ELECTRICAL	189	179	10	81	76	5
ENGINEERING SCIENCE	87	84	3	35	32	3
INDUSTRIAL	13	10	3	4	2	2
MECHANICAL	123	115	8	113	111	2
METALLURGICAL/MATERIALS	193	178	15	96	90	6
MINING	16	11	5	0	0	0
NUCLEAR	26	22	4	24	23	1
PETROLEUM	2	2	0	0	0	0
ENGINEERING, N.E.C.	48	45	3	30	30	0
PHYSICAL SCIENCES	4,452	3,978	474	619	534	85
ASTRONOMY	132	122	10	66	61	5
CHEMISTRY	2,861	2,496	365	289	221	68
PHYSICS	1,444	1,345	99	264	252	12
PHYSICAL SCIENCES, N.E.C.	15	15	0	0	0	0
ENVIRONMENTAL SCIENCES	339	306	33	142	130	12
ATMOSPHERIC SCIENCES	46	42	4	32	32	0
GEOSCIENCES	214	194	20	64	60	4
OCEANOGRAPHY	67	58	9	33	28	5
ENVIRONMENTAL SCIENCES, N.E.C.	12	12	0	11	10	1
MATHEMATICAL/COMPUTER SCIENCES	147	128	19	169	163	6
COMPUTER SCIENCE	48	39	9	81	77	4
MATHEMATICS AND APPLIED MATHEMATICS	88	79	9	59	57	2
STATISTICS	11	10	1	29	29	0
LIFE SCIENCES	12,881	9,683	3,198	1,738	1,224	514
AGRICULTURAL SCIENCES	290	254	36	70	56	14
BIOLOGICAL SCIENCES	7,585	5,580	2,005	1,044	735	309
ANATOMY	258	182	76	65	42	23
BIOCHEMISTRY	1,699	1,284	415	212	139	73
BIOLOGY	851	580	271	242	151	91
BIOMETRY/EPIDEMIOLOGY	62	40	22	21	16	5
BIOPHYSICS	115	99	16	44	35	9
BOTANY	240	178	62	29	20	9
CELL BIOLOGY	501	357	144	37	28	9
ECOLOGY	44	33	11	10	10	0
ENTOMOLOGY/PARASITOLOGY	127	107	20	35	28	7
GENETICS	290	185	105	21	11	10
MICROBIOLOGY	986	707	279	56	37	19
NUTRITION	171	121	50	26	21	5
PATHOLOGY	470	368	102	36	32	4
PHARMACOLOGY	749	592	157	70	61	9
PHYSIOLOGY	954	772	182	115	88	27
ZOOLOGY	178	110	68	18	9	9
BIOSCIENCES, N.E.C.	90	65	25	7	7	0
HEALTH SCIENCES	5,006	3,849	1,157	624	433	191
ANESTHESIOLOGY	66	50	16	4	4	0
CANCER/ONCOLOGY	119	88	31	11	11	0
CARDIOLOGY	343	297	46	30	24	6
DENTISTRY	161	136	25	4	4	0
ENDOCRINOLOGY	200	162	38	15	14	1
GASTROENTEROLOGY	114	93	21	8	6	2
HEMATOLOGY	163	131	32	4	1	3
NEUROLOGY	367	298	69	44	38	6
NURSING	8	6	2	2	2	0
OBSTETRICS/GYNECOLOGY	113	75	38	3	2	1
OPHTHALMOLOGY	144	111	33	7	4	3
OTORHINOLARYNGOLOGY	41	35	6	11	9	2
PEDIATRICS	559	364	195	35	24	11
PHARMACEUTICAL SCIENCES	243	207	36	31	24	7
PREVENTIVE MEDICINE/ COMMUNITY HEALTH	135	88	47	33	28	5
PSYCHIATRY	292	180	112	141	76	65
PULMONARY DISEASE	127	118	9	8	8	0
RADIOLOGY	165	123	42	71	47	24
SPEECH PATHOLOGY/AUDIOLOGY	16	9	7	13	9	4
SURGERY	297	277	20	36	26	10
VETERINARY SCIENCES	46	25	21	8	2	6
CLINICAL MEDICINE, N.E.C.	1,173	893	280	99	66	33
HEALTH RELATED, N.E.C.	114	83	31	5	3	2
PSYCHOLOGY	473	291	182	156	99	57
SOCIAL SCIENCES	332	225	107	222	182	40
AGRICULTURAL ECONOMICS	6	6	0	22	20	2
ANTHROPOLOGY	30	16	14	20	13	7
ECONOMICS (EXCEPT AGRICULTURAL)	29	21	8	73	70	3
GEOGRAPHY	23	16	7	6	5	1
HISTORY AND PHILOSOPHY OF SCIENCE	21	15	6	0	0	0
LINGUISTICS	47	32	15	9	7	2
POLITICAL SCIENCE	47	38	9	34	23	11
SOCIOLOGY	90	54	36	48	36	12
SOCIOLOGY/ANTHROPOLOGY	0	0	0	0	0	0
SOCIAL SCIENCES, N.E.C.	39	27	12	8	6	2

SOURCE; Graduate Science Education Student Support and Postdoctorals, Fall 1981, National Science Foundation, In press.

TABLE 5-24

FULL TIME SCIENCE & ENGINEERING POSTDOCTORATES IN DOCTORATE GRANTING INSTITUTIONS, BY CITIZENSHIP, 1977-81

FIELD	U.S. CITIZENS				FOREIGN CITIZENS			
	NUMBER				NUMBER			
	1977	1979	1980	1981	1977	1979	1980	1981
TOTAL, ALL FIELDS	13,336	12,035	11,907	12,357	6,152	6,054	6,506	7,298
ENGINEERING	592	417	303	332	653	653	676	699
AEROSPACE	18	9	6	8	23	23	14	6
AGRICULTURAL	14	20	4	4	6	5	5	5
BIOMEDICAL	59	22	17	20	14	10	14	14
CHEMICAL	81	46	46	43	130	129	143	131
CIVIL	61	53	57	34	92	70	63	69
ELECTRICAL	99	68	39	104	72	74	82	85
ENGINEERING SCIENCE	53	36	29	37	38	39	50	50
INDUSTRIAL	13	2	8	6	7	5	8	7
MECHANICAL	79	57	43	25	82	86	94	98
METALLURGICAL/MATERIALS	70	41	27	25	139	168	144	168
MINING	6	0	1	5	8	5	3	11
NUCLEAR	14	4	5	6	7	14	17	22
PETROLEUM	2	2	1	0	3	4	5	2
ENGINEERING, N.E.C.	23	37	20	17	27	19	37	31
PHYSICAL SCIENCES	2,464	2,007	2,103	2,101	1,732	2,013	2,158	2,351
ASTRONOMY	136	92	99	95	31	37	42	37
CHEMISTRY	1,419	1,175	1,195	1,213	1,239	1,429	1,515	1,648
PHYSICS	907	738	798	778	462	547	597	666
PHYSICAL SCIENCES, N.E.C.	2	2	11	15	0	0	4	0
ENVIRONMENTAL SCIENCES	271	204	205	216	105	111	102	123
ATMOSPHERIC SCIENCES	42	17	26	24	7	17	17	22
GEOSCIENCES	157	138	124	133	85	81	70	81
OCEANOGRAPHY	56	41	44	48	8	13	13	19
ENVIRONMENTAL SCIENCES, N.E.C.	16	8	11	11	5	0	2	1
MATHEMATICAL/COMPUTER SCIENCES	94	107	100	70	51	93	105	77
COMPUTER SCIENCE	59	57	45	25	16	18	17	23
MATHEMATICS AND APPLIED MATHEMATICS	29	37	45	39	25	65	77	49
STATISTICS	6	13	10	6	10	10	11	5
LIFE SCIENCES	9,294	8,581	8,459	9,010	3,475	3,049	3,290	3,871
AGRICULTURAL SCIENCES	209	141	146	175	84	74	93	115
BIOLOGICAL SCIENCES	4,559	4,887	4,918	5,223	1,943	1,869	2,078	2,362
ANATOMY	167	208	207	200	51	46	42	58
BIOCHEMISTRY	882	981	925	974	498	507	594	725
BIOLOGY	561	718	707	611	286	239	260	240
BIOMETRY/EPIDEMIOLOGY	47	54	62	44	18	14	10	18
BIOPHYSICS	144	87	104	69	77	18	52	46
BOTANY	126	111	158	165	62	52	62	75
CELL BIOLOGY	200	239	269	351	78	87	117	150
ECOLOGY	16	15	16	36	2	3	6	8
ENTOMOLOGY/PARASITOLOGY	81	76	92	99	38	28	27	28
GENETICS	163	166	182	212	46	65	69	78
MICROBIOLOGY	692	648	656	710	219	217	220	276
NUTRITION	121	127	76	114	51	43	53	57
PATHOLOGY	327	328	360	347	93	105	116	123
PHARMACOLOGY	391	434	403	500	226	199	221	249
PHYSIOLOGY	457	503	485	575	150	173	178	179
ZOOLOGY	129	136	147	146	28	44	21	32
BIOSCIENCES, N.E.C.	55	56	69	70	20	29	30	20
HEALTH SCIENCES	4,526	3,553	3,395	3,612	1,448	1,106	1,119	1,394
ANESTHESIOLOGY	56	49	33	46	19	13	21	20
CANCER/ONCOLOGY	92	76	105	92	38	34	38	27
CARDIOLOGY	410	237	274	254	92	61	60	89
DENTISTRY	291	99	89	115	69	39	13	46
ENDOCRINOLOGY	167	119	126	143	60	24	35	57
GASTROENTEROLOGY	165	76	107	92	33	27	16	22
HEMATOLOGY	201	135	125	138	47	16	23	25
NEUROLOGY	260	251	286	283	53	82	69	84
NURSING	0	7	9	8	0	0	0	0
OBSTETRICS/GYNECOLOGY	104	78	74	51	63	65	48	62
OPHTHALMOLOGY	132	120	89	107	54	18	33	37
OTORHINOLARYNGOLOGY	22	26	32	24	8	9	14	17
PEDIATRICS	382	418	352	451	132	93	75	108
PHARMACEUTICAL SCIENCES	107	110	62	93	130	125	171	150
PREVENTIVE MEDICINE/ COMMUNITY HEALTH	102	88	134	103	10	24	27	32
PSYCHIATRY	300	265	266	264	29	27	30	28
PULMONARY DISEASE	191	122	120	117	37	21	7	10
RADIOLOGY	121	91	104	95	69	47	52	70
SPEECH PATHOLOGY/AUDIOLOGY	29	34	16	14	2	1	0	2
SURGERY	275	170	174	157	151	94	124	140
VETERINARY SCIENCES	66	19	45	29	26	7	16	17
CLINICAL MEDICINE, N.E.C.	1,000	891	704	855	315	253	217	318
HEALTH RELATED, N.E.C.	53	72	69	81	11	26	40	33
PSYCHOLOGY	360	420	444	419	39	34	30	54
SOCIAL SCIENCES	261	299	293	209	97	101	145	123
AGRICULTURAL ECONOMICS	24	2	6	5	4	4	2	1
ANTHROPOLOGY	46	34	37	26	7	7	3	4
ECONOMICS (EXCEPT AGRICULTURAL)	29	50	92	18	36	48	52	11
GEOGRAPHY	2	2	4	7	7	3	11	16
HISTORY AND PHILOSOPHY OF SCIENCE	15	7	7	13	7	4	8	8
LINGUISTICS	15	10	22	20	14	20	32	27
POLITICAL SCIENCE	21	26	21	23	6	4	11	24
SOCIOLOGY	88	106	85	79	11	9	15	11
SOCIOLOGY/ANTHROPOLOGY	0	4	2	0	0	0	0	0
SOCIAL SCIENCES, N.E.C.	21	58	17	18	5	2	11	21

1/ DATA ON POSTDOCTORATES WERE NOT COLLECTED IN 1978.

SOURCE: National Center for Education Statistics, Preliminary Releases, and unpublished data

TABLE 5-25

WOMEN AS A PERCENT OF TOTAL FULL-TIME INSTRUCTIONAL FACULTY ON 9-MONTH CONTRACTS IN INSTITUTIONS OF HIGHER EDUCATION BY ACADEMIC RANK AND LEVEL OF INSTITUTIONAL UNIT, 1972-73 - 1981-82

Academic Rank and Year	Institutions	PUBLIC				PRIVATE			
		Total	Univ.	4-year Inst.	2-year Inst.	Total	Univ.	4-year Inst.	2-year Inst.
ALL RANKS									
1972-73	22.3	22.7	17.1	23.2	32.3	21.2	14.5	23.6	45.4
1974-75	24.1	24.8	19.3	24.4	32.7	23.5	16.3	25.6	44.1
1976-77	25.2	25.7	18.9	24.6	34.4	23.7	17.0	26.0	42.4
1977-78	25.2	25.6	18.7	24.6	34.5	24.1	16.9	26.4	44.8
1979-80	25.9	26.4	20.0	26.4	34.7	24.8	18.2	27.4	48.6
1980-81	26.7	26.9	19.5	25.8	35.9	26.1	19.0	28.4	47.1
1981-82	27.1	27.3	19.9	26.2	36.4	26.2	19.2	28.6	46.9
PROFESSORS									
1972-73	9.8	10.0	6.7	12.7	21.2	9.5	5.4	12.3	31.5
1974-75	10.3	10.5	6.6	12.7	24.7	10.1	5.6	13.0	26.6
1976-77	9.6	9.7	6.2	11.8	20.8	9.2	5.6	12.0	26.4
1977-78	9.7	9.7	5.9	11.6	22.1	9.7	5.5	12.6	29.4
1979-80	9.8	9.7	6.4	11.8	23.5	10.1	6.0	12.7	29.6
1980-81	10.6	10.6	6.2	12.3	22.9	10.6	6.5	13.4	28.9
1981-82	10.8	10.8	6.4	12.5	23.0	10.7	6.6	13.3	29.7
ASSOCIATE PROF.									
1972-73	16.3	15.8	12.3	17.4	24.3	17.2	12.9	19.1	34.3
1974-75	16.9	16.1	13.3	17.0	24.7	18.6	13.5	20.8	26.6
1976-77	17.6	17.3	13.8	17.7	26.6	18.3	14.4	20.0	28.5
1977-78	17.8	17.4	13.6	17.7	27.5	18.7	14.7	20.3	30.8
1979-80	19.4	19.1	16.2	18.9	29.4	20.3	16.6	21.6	42.7
1980-81	20.6	20.4	16.7	20.3	29.8	21.1	17.6	22.4	42.3
1981-82	21.5	21.3	17.6	21.0	31.7	21.9	18.8	23.0	40.7
ASSISTANT PROF.									
1972-73	23.8	23.7	20.0	24.7	31.3	24.1	19.0	25.7	41.3
1974-75	27.1	27.0	24.4	27.6	33.8	27.3	22.4	28.7	43.2
1976-77	30.3	30.4	27.6	30.7	35.8	30.1	26.2	31.4	46.0
1977-78	31.5	31.5	28.7	31.7	36.5	31.5	27.5	32.8	51.8
1979-80	33.9	33.8	31.1	34.5	38.6	34.2	30.0	35.4	52.9
1980-81	35.3	35.2	31.3	35.9	40.3	35.4	30.7	37.2	51.2
1981-82	35.9	35.8	31.8	36.8	40.9	36.1	30.9	40.0	51.3
INSTRUCTORS									
1972-73	39.9	39.2	44.4	44.0	35.1	42.5	41.0	41.5	53.8
1974-75	40.6	39.4	49.6	47.7	34.2	46.5	44.8	46.2	51.0
1976-77	50.6	51.1	53.8	51.5	48.1	49.5	48.6	49.0	59.4
1977-78	49.9	50.1	54.0	52.7	44.0	49.4	44.4	50.0	57.2
1979-80	51.8	52.1	55.7	52.7	47.7	51.0	48.6	51.0	57.4
1980-81	52.8	58.3	56.0	53.7	50.7	51.5	49.6	51.6	56.3
1981-82	53.3	54.3	56.6	54.7	52.1	51.2	47.2	51.5	59.1
LECTURERS									
1972-73	34.9	35.1	30.3	40.2	51.2	34.2	29.1	38.1	52.9
1974-75	39.8	39.5	36.3	43.8	50.0	40.5	35.9	46.2	91.7
1976-77	40.8	41.1	40.9	39.7	54.6	39.6	36.3	43.6	87.5
1977-78	42.8	42.5	41.8	43.4	42.5	43.6	42.9	40.6	95.7
1979-80	44.7	45.3	44.4	46.4	46.1	45.2	42.1	49.9	-
1980-81	46.5	46.2	45.8	45.2	54.8	47.3	46.1	46.9	90.0
1981-82	47.1	47.4	47.3	46.2	55.9	45.7	47.3	43.3	70.0
NO ACADEMIC RANK									
1972-73	32.8	32.3	23.4	38.8	32.4	34.7	10.0	30.1	40.6
1974-75	34.3	34.0	39.1	39.9	33.7	35.5	10.0	30.8	44.5
1976-77	34.8	34.5	53.1	46.5	34.2	37.6	42.7	35.1	40.2
1977-78	34.6	34.5	35.1	39.4	34.5	35.3	33.8	29.5	42.3
1979-80	34.3	33.8	38.6	33.3	33.8	42.4	40.8	36.9	48.8
1980-81	36.1	35.7	40.3	36.0	35.7	40.4	40.1	33.3	46.7
1981-82	36.4	36.1	43.2	39.8	36.0	39.8	42.2	33.4	46.2

SOURCE: 1980 Census, Special EEO File, Bureau of the Census

TABLE 5-26

Teachers, Counselors and Administrators by Educational Level, Sex and Race/Ethnicity, 1980

Occupations	All Persons	Males							Females						
		Total Males	Males Not of Spanish Origin					Males of Spanish Origin	Total Females	Females Not of Spanish Origin					Females of Spanish Origin
			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.	
EDUCATION	4359269	1490879	1323354	91726	5883	26805	1731	41580	2868390	2438220	302013	11847	32937	1902	81471
	100.00%	34.20%	30.36%	2.10%	0.13%	0.61%	0.04%	0.95%	65.80%	55.93%	6.93%	0.27%	0.76%	0.04%	1.87%
Teachers, Elementary & Secondary	3363514	950590	842201	67854	3765	8798	810	27162	2412924	2036833	271570	10096	24329	1439	68657
	100.00%	28.26%	25.04%	2.02%	0.11%	0.26%	0.02%	0.81%	71.74%	60.56%	8.07%	0.30%	0.72%	0.04%	2.04%
Prekindergarten & Kindergarten	183338	6564	4887	1273	79	157	5	363	176774	142126	24171	1099	1673	173	7532
	100.00%	3.58%	2.56%	0.69%	0.04%	0.09%	0.00%	0.20%	96.42%	77.52%	13.18%	0.60%	0.91%	0.09%	4.11%
Elementary School	2319370	569823	497935	45830	2207	5627	563	17661	1749547	1471072	203147	7190	18451	919	48768
	100.00%	24.57%	21.47%	1.98%	0.10%	0.24%	0.02%	0.76%	75.43%	63.43%	8.76%	0.31%	0.80%	0.04%	2.10%
Secondary School	860808	374203	339579	20751	1479	3014	242	9138	486603	423635	44252	1807	4205	347	12357
	100.00%	43.47%	39.45%	2.41%	0.17%	0.35%	0.03%	1.06%	56.53%	49.21%	5.14%	0.21%	0.49%	0.04%	1.44%
Teachers, Postsecondary	995755	540289	481163	23872	1918	18007	921	14418	455466	401387	30443	1751	8608	483	12814
	100.00%	54.26%	48.32%	2.40%	0.19%	1.81%	0.09%	1.45%	45.74%	40.31%	3.06%	0.18%	0.86%	0.05%	1.29%
Counselors, Educational & Vocational	198256	90587	73447	10607	1059	1219	93	4162	107669	83405	17183	1379	1395	99	4208
	100.00%	45.69%	37.05%	5.35%	0.53%	0.61%	0.05%	2.10%	54.31%	42.07%	8.67%	0.70%	0.70%	0.05%	2.12%
Education & Related Fields, Administrators	387538	239766	210678	20154	945	1718	158	6113	147772	121224	19193	1050	1532	101	4672
	100.00%	61.87%	54.36%	5.20%	0.24%	0.44%	0.04%	1.58%	38.13%	31.28%	4.95%	0.27%	0.40%	0.03%	1.21%
Teacher's Aides	215709	16163	9983	3132	323	765	37	1923	199546	138177	33006	2435	2053	147	22828
	100.00%	7.49%	4.63%	1.45%	0.15%	0.35%	0.02%	0.89%	92.51%	64.06%	15.72%	1.13%	0.95%	0.07%	10.58%

SOURCE: 1980 Census, Special EEO File, Bureau of the Census

TABLE 5-27

Post-Secondary Teachers by Field, Sex and Race/Ethnicity, 1980

Occupations	All Persons	Males							Females						
		Total Males	Males Not of Spanish Origin					Males of Spanish Origin	Total Females	Females Not of Spanish Origin					Females of Spanish Origin
			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.	
Teachers, Postsecondary	995755 100.00%	540289 54.26%	481153 48.32%	23872 2.40%	1918 0.19%	18007 1.81%	921 0.09%	14418 1.45%	455466 45.74%	401387 40.31%	30443 3.06%	1751 0.18%	8608 0.86%	463 0.05%	12814 1.29%
Agriculture/Forestry	3813 100.00%	3246 85.13%	3009 78.91%	122 3.20%	18 0.47%	41 1.08%	18 0.47%	38 1.00%	567 14.87%	521 13.66%	37 0.97%	0 0.00%	2 0.05%	0 0.00%	7 0.18%
Art/Drama/Music	28385 100.00%	14718 51.85%	13448 47.38%	773 2.72%	64 0.23%	135 0.48%	12 0.04%	286 1.01%	13667 48.15%	12458 43.89%	673 2.37%	54 0.19%	272 0.96%	16 0.06%	194 0.68%
Biological Science	9651 100.00%	6537 67.73%	6095 63.15%	122 1.26%	8 0.08%	230 2.38%	7 0.07%	75 0.78%	3114 32.27%	2782 28.83%	171 1.77%	13 0.13%	113 1.17%	5 0.05%	30 0.31%
Business/Commerce/ Marketing	7618 100.00%	4022 52.81%	3651 47.94%	169 2.22%	20 0.26%	117 1.54%	7 0.09%	58 0.76%	3594 47.19%	3180 41.75%	259 3.40%	10 0.13%	45 0.59%	0 0.00%	100 1.31%
Chemistry	8382 100.00%	6671 79.59%	6040 72.06%	148 1.77%	15 0.18%	351 4.19%	0 0.00%	117 1.40%	1711 20.41%	1531 18.27%	58 0.69%	0 0.00%	83 0.99%	0 0.00%	39 0.47%
Computer Science	2558 100.00%	1842 72.01%	1519 59.38%	68 2.66%	7 0.27%	170 6.65%	6 0.23%	72 2.81%	716 27.99%	615 24.04%	54 2.11%	0 0.00%	20 0.78%	0 0.00%	27 1.06%
Earth/Environmental/ Marine	2274 100.00%	1904 83.73%	1827 80.34%	10 0.44%	5 0.22%	38 1.67%	12 0.53%	12 0.53%	370 16.27%	342 15.04%	0 0.00%	0 0.00%	9 0.40%	0 0.00%	19 0.84%
Economics	5032 100.00%	4024 79.97%	3681 73.15%	103 2.05%	0 0.00%	172 3.42%	13 0.26%	55 1.09%	1008 20.03%	872 17.33%	43 0.85%	0 0.00%	54 1.07%	0 0.00%	39 0.78%
Education	2308 100.00%	1373 59.49%	1207 52.30%	121 5.24%	6 0.26%	9 0.39%	6 0.26%	24 1.04%	935 40.51%	807 34.97%	90 3.90%	0 0.00%	32 1.39%	0 0.00%	6 0.26%
Engineering	10972 100.00%	9719 88.58%	8670 79.02%	317 2.89%	38 0.35%	487 4.44%	6 0.05%	201 1.83%	1253 11.42%	1115 10.16%	70 0.64%	0 0.00%	36 0.33%	7 0.06%	25 0.23%
English	23403 100.00%	10538 45.03%	9740 41.62%	302 1.29%	8 0.03%	192 0.82%	28 0.12%	268 1.15%	12865 54.97%	11664 49.84%	700 2.99%	45 0.19%	148 0.63%	22 0.09%	286 1.22%
Foreign Language	9954 100.00%	4039 40.58%	3331 33.46%	56 0.56%	6 0.06%	184 1.85%	11 0.11%	451 4.53%	5915 59.42%	4689 47.11%	129 1.30%	3 0.03%	254 2.55%	23 0.23%	817 8.21%
Health Specialties	19551 100.00%	2596 13.28%	2360 12.07%	139 0.71%	12 0.06%	51 0.26%	0 0.00%	34 0.17%	16955 86.72%	15159 77.54%	1093 5.59%	61 0.31%	303 1.55%	6 0.03%	333 1.70%
History	5600 100.00%	4267 76.20%	4002 71.46%	126 2.25%	0 0.00%	61 1.09%	0 0.00%	78 1.39%	1333 23.80%	1224 21.86%	84 1.50%	0 0.00%	20 0.36%	0 0.00%	5 0.09%
Home Economics	1987 100.00%	163 8.20%	150 7.55%	5 0.25%	0 0.00%	8 0.40%	0 0.00%	0 0.00%	1824 91.80%	1655 83.29%	112 5.64%	1 0.05%	13 0.65%	0 0.00%	43 2.16%

TABLE 5-27 (continued)

Post-Secondary Teachers by Field, Sex and Race/Ethnicity, 1980

Occupations	All Persons	Males							Females						
		Total Males	Males Not of Spanish Origin					Males of Spanish Origin	Total Females	Females Not of Spanish Origin					Females of Spanish Origin
			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.	
Teachers, Postsecondary Continued															
Law	4112 100.00%	3301 80.28%	3125 76.00%	104 2.53%	0 0.00%	19 0.46%	4 0.10%	49 1.19%	811 19.72%	711 17.29%	78 1.90%	0 0.00%	6 0.15%	0 0.00%	16 0.39%
Mathematical Sciences	16697 100.00%	11390 68.22%	10004 59.91%	496 2.97%	58 0.35%	507 3.04%	14 0.08%	311 1.86%	5307 31.78%	4555 27.28%	438 2.62%	7 0.04%	221 1.32%	5 0.03%	81 0.49%
Medical Science	9014 100.00%	6891 76.45%	6141 68.13%	175 1.94%	0 0.00%	319 3.54%	31 0.34%	225 2.50%	2123 23.55%	1939 21.51%	81 0.90%	0 0.00%	45 0.50%	7 0.08%	51 0.57%
Natural Sciences, Misc.	831 100.00%	637 76.65%	588 70.76%	6 0.72%	0 0.00%	19 2.29%	0 0.00%	24 2.89%	194 23.35%	184 22.14%	10 1.20%	0 0.00%	0 0.00%	0 0.00%	0 0.00%
Physical Education	9008 100.00%	5382 59.75%	4722 52.42%	432 4.80%	26 0.29%	69 0.77%	0 0.00%	133 1.48%	3626 40.25%	3319 36.85%	194 2.15%	20 0.22%	35 0.39%	8 0.09%	50 0.56%
Physics	5414 100.00%	4882 90.17%	4363 80.59%	65 1.20%	6 0.11%	303 5.60%	12 0.22%	133 2.46%	532 9.83%	452 8.35%	16 0.30%	0 0.00%	38 0.70%	4 0.07%	22 0.41%
Political Science	2066 100.00%	1677 81.17%	1451 70.23%	110 5.32%	6 0.29%	78 3.78%	13 0.63%	19 0.92%	389 18.83%	375 18.15%	0 0.00%	0 0.00%	10 0.48%	0 0.00%	4 0.19%
Psychology	5820 100.00%	3494 60.03%	3244 55.74%	123 2.11%	29 0.50%	53 0.91%	0 0.00%	45 0.77%	2326 39.97%	2047 35.17%	153 2.63%	0 0.00%	47 0.81%	0 0.00%	79 1.36%
Social Sciences, Misc.	2009 100.00%	1301 64.76%	1192 59.33%	23 1.14%	16 0.80%	27 1.34%	11 0.55%	32 1.59%	708 35.24%	642 31.96%	12 0.60%	6 0.30%	6 0.30%	0 0.00%	42 2.09%
Social Work	810 100.00%	329 40.62%	306 37.78%	12 1.48%	0 0.00%	0 0.00%	0 0.00%	11 1.36%	481 59.38%	318 39.26%	105 12.96%	0 0.00%	23 2.84%	0 0.00%	35 4.32%
Sociology	3207 100.00%	2263 70.56%	2016 62.86%	129 4.02%	10 0.31%	62 1.93%	13 0.41%	33 1.03%	944 29.44%	816 25.44%	87 2.71%	0 0.00%	18 0.56%	0 0.00%	23 0.72%
Special Education	32818 100.00%	10138 30.89%	8982 27.37%	693 2.11%	68 0.21%	118 0.36%	8 0.02%	269 0.82%	22680 69.11%	19846 59.86%	2364 7.20%	107 0.33%	129 0.39%	12 0.04%	422 1.29%
Theology	3578 100.00%	2809 78.55%	2664 74.50%	64 1.79%	0 0.00%	46 1.29%	0 0.00%	35 0.98%	767 21.45%	704 19.69%	25 0.70%	8 0.22%	12 0.34%	0 0.00%	18 0.50%
Trade/Industrial	3595 100.00%	2490 69.26%	2221 61.78%	183 5.09%	8 0.22%	36 1.00%	5 0.14%	37 1.03%	1105 30.74%	993 27.62%	95 2.64%	0 0.00%	0 0.00%	0 0.00%	17 0.47%
Miscellaneous Post-secondary Teachers	755292 100.00%	407646 53.97%	361404 47.85%	18676 2.47%	1484 0.20%	14105 1.87%	684 0.09%	11293 1.50%	347646 46.03%	306072 40.52%	23212 3.07%	1416 0.19%	6614 0.88%	348 0.05%	9984 1.32%

SOURCE: Digest of Education Statistics, Series 1973 through 1982 editions

TABLE 5-28

HISTORICAL SUMMARY OF U.S. FACULTY* IN HIGHER EDUCATION BY SEX, 1869-70 TO 1979-80

YEAR	Total Institutions	Total Faculty	Men	Women	% W
1869-70	563	5,553**	4,887**	666**	12.0
1879-80	811	11,522**	7,328**	4,194**	36.4
1889-90	998	15,809**	12,704**	3,105**	19.6
1899-1900	977	23,868	19,151	4,717	19.8
1909-10	951	36,480	29,132	7,348	20.1
1919-20	1,041	48,615	35,807	12,808	26.4
1929-30	1,409	82,386	60,017	22,369	27.2
1939-40	1,708	146,929	106,328	40,601	27.6
1949-50	1,851	246,722	186,189	60,533	24.5
1959-60	2,008	380,554	296,773	83,781	22.0
1969-70	2,528	825,000	619,000	206,000	25.0
1971-72	2,720	881,665	639,251	242,414	27.5
1976-77	2,785	1,073,119	729,169	343,950	32.0
1977-78**	2,826	1,090,000	740,000	350,000	32.1
1978-79	3,134	1,097,000	732,000	365,000	33.3
1979-80	3,150	1,127,000	751,000	376,000	33.3
1980-81	3,253				

* All individuals, not reduced to full-time equivalents. ** Estimated.

SOURCE: 1980 Fact Book for Academic Administrators, American Council on Education and Digest of Education - Statistics, 1981, National Center for Education Statistics and Profile of Women's College Presidents, Women's College Coalition

TABLE 5-29

WOMEN COLLEGE PRESIDENTS BY TYPE AND CONTROL OF INSTITUTION, 1975-1981

Year and Type of Institution		All Institutions Headed by Women		Public Institutions Headed by Women		Private Institutions Headed by Women		Women's Colleges* Headed by Women	
		No.	%†	No.	%†	No.	%†	No.	%†
1975	Total	148	4.8	16	1.1	132	8.2	na	na
	Four-Year	103	5.4	5	0.9	98	7.2	na	na
	Two-Year	45	3.9	11	1.2	34	14.2	na	na
1976	Total	154	5.0	16	1.1	138	8.6	71	56.8
	Four-Year	110	5.7	3	0.5	107	7.8	57	58.8
	Two-Year	44	3.8	13	1.4	31	13.0	14	50.0
1977	Total	156	5.0	19	1.3	137	8.3	87	71.3
	Four-Year	112	5.7	5	0.9	107	7.7	72	75.0
	Two-Year	44	3.7	14	1.5	30	12.0	15	57.7
1978	Total	177	5.6	31	2.1	146	8.7	75	64.1
	Four-Year	123	6.3	9	1.6	114	8.1	62	66.7
	Two-Year	54	4.5	22	2.4	32	11.3	13	54.2
1980	Total	219	6.9	62	4.2	157	9.4	78	67.8
	Four-Year	145	7.4	21	3.8	124	8.8	60	67.4
	Two-Year	64	5.4	41	4.4	33	12.3	18	18.3
1981	Total	231	7.2	72	4.8	159	9.2	80	70.2
	Four-Year	162	8.3						
	Two-Year	69	5.4						

na Not available in source.

* Institutions with enrollment of at least 90 percent women.

† Institutions headed by women as a percentage of all institutions of the type indicated. Annual directories published by NCES are the source of data concerning the "universe" of institutions by type and control.

SOURCE: Women and Minorities in Administration of Higher Education Institutions, College and University Personnel Association, 1981

TABLE 5-30

ADMINISTRATORS BY RACE AND SEX IN 1975-76 AND 1978-79 AT PRIVATE AND PUBLIC WHITE COEDUCATIONAL INSTITUTIONS

Exactly Matched Positions	PUBLIC								PRIVATE							
	1975-76				1978-79				1975-76				1978-79			
	White Men	White Women	Minority Men	Minority Women	White Men	White Women	Minority Men	Minority Women	White Men	White Women	Minority Men	Minority Women	White Men	White Women	Minority Men	Minority Women
Chief Executive Officer	178	7	1	0	195	9	0	0	334	5	6	0	339	3	8	0
Chief Planning Officer	21	1	0	0	27	6	1	0	67	1	1	0	65	4	3	2
Chief Business Officer	143	7	1	0	148	9	0	0	238	1	6	0	253	4	5	0
Chief Budget Officer	22	3	0	0	28	1	0	0	80	7	1	0	89	6	3	0
Director, Food Service	41	12	1	2	38	9	2	2	66	21	2	1	80	17	4	1
Purchasing Agent	47	7	2	0	59	13	2	0	136	18	4	1	159	25	5	1
Manager, Bookstore	61	32	0	0	67	56	4	0	102	54	4	0	123	56	7	0
Director, Legal Services	5	1	0	0	6	1	0	1	32	2	0	1	37	4	1	0
Director, Personnel/Human Resources	45	22	2	3	38	25	0	2	119	28	11	0	113	36	11	0
Director, Affirmative Action/ Equal Employment	5	4	6	2	5	9	6	2	15	28	27	13	21	45	34	26
Director, Computer Center	77	3	0	0	90	8	4	0	166	1	2	0	190	4	7	0
Director, Information Systems	19	3	0	0	20	5	0	0	49	0	0	1	50	5	2	0
Comptroller	98	12	1	1	92	14	4	0	132	8	4	1	141	10	5	2
Chief Academic Officer	126	5	0	0	135	16	1	0	211	17	5	1	236	12	8	1
Director, Library Services	101	50	2	0	99	56	4	3	182	60	4	5	191	50	6	2
Director, Institutional Research	25	4	0	0	35	9	1	0	94	15	5	1	113	22	4	2
Director, Athletics	85	2	3	0	117	3	1	0	142	1	2	0	185	2	5	0
Dean, Agriculture	1	0	0	0	1	0	0	0	40	0	0	0	43	0	1	0
Dean, Architecture	6	0	0	0	4	0	0	0	28	0	0	0	27	0	0	0
Dean, Business	43	1	2	0	50	2	2	0	114	2	2	1	144	8	1	2
Dean, Dentistry	6	0	0	0	6	0	0	0	14	0	0	0	15	0	0	0
Dean, Education	35	5	0	0	33	5	0	0	98	3	10	1	113	6	6	0
Dean, Engineering	24	0	0	0	25	0	0	0	63	1	1	1	82	0	2	0
Dean, Fine Arts	18	3	0	0	17	1	0	0	45	6	2	0	40	3	4	0
Dean, Graduate Programs	28	5	1	0	41	3	1	0	85	6	3	0	95	10	5	1
Dean, Home Economics	1	3	0	0	1	5	0	0	5	35	1	0	8	24	0	0
Dean, Law	19	0	1	0	22	0	2	0	29	0	0	0	32	0	0	0
Dean, Medicine	5	0	0	0	6	0	0	0	26	0	0	0	26	0	0	0
Dean, Music	21	0	0	0	16	0	0	0	31	0	0	0	22	3	1	0
Dean, Nursing	0	21	0	0	0	23	0	0	8	60	0	3	3	70	0	3
Dean, Pharmacy	4	0	0	0	5	0	0	0	18	0	0	0	23	0	0	0
Dean, Social Work	11	2	0	0	5	1	2	0	27	5	2	0	19	6	3	1
Dean, Vocational Education	2	0	0	0	1	0	0	0	52	1	2	0	69	0	2	0
Chief Student Affairs Officer	105	13	4	2	134	4	23	0	186	16	16	1	216	25	15	2
Director, Student Placement	51	28	2	2	62	51	3	2	132	20	5	2	138	27	9	5
Director, Student Counseling	55	13	2	0	60	36	4	1	128	27	1	3	151	44	10	3
Director, Student Union	38	12	0	2	44	18	1	1	116	13	3	1	133	18	11	1
Director, Student Housing	52	23	3	0	68	41	0	2	97	17	3	1	107	19	6	0
Director, Information Office	42	22	0	0	46	23	0	0	86	34	1	0	93	42	2	0
Director, Community Services	14	1	1	1	10	4	3	0	94	7	5	2	71	13	6	1
	1680	327	35	15	1856	466	71	16	3783	527	146	43	4126	636	208	57

SOURCE: Fact sheet on Women in Educational Administration compiled by Suzanne Howard, September 1980 and Digest of Education Statistics, 1982

TABLE 5-31

WOMEN AS A PERCENT OF TOTAL STAFF IN ELEMENTARY AND SECONDARY EDUCATION

	YEAR OF DATA										
	1928	1948	1965	1968	1974	1976	1977	1978	1979	1980	1981
Teachers											
Elementary		93.0		85.0	83.0	87.0		83.0		83.0	83.1
Secondary		60.0		47.0		48.0		46.0		48.0	48.9
Principals											
Elementary	55.0	41.0			13.0			18.0			
Secondary			10.0				7.0				
Guidance Counselors					49.5						
District Superintendents					0.5					1.0	
State Superintendents								4.0		12.0	
U.S. School Bd. Members						15.0			28.0		
State Bds. of Education					20.0				30.0		
Ph.D.'s in Ed. Adm.							22.0	25.0	28.0		

SOURCE: The Condition of Education, 1982 Edition, NCES

TABLE 5-32

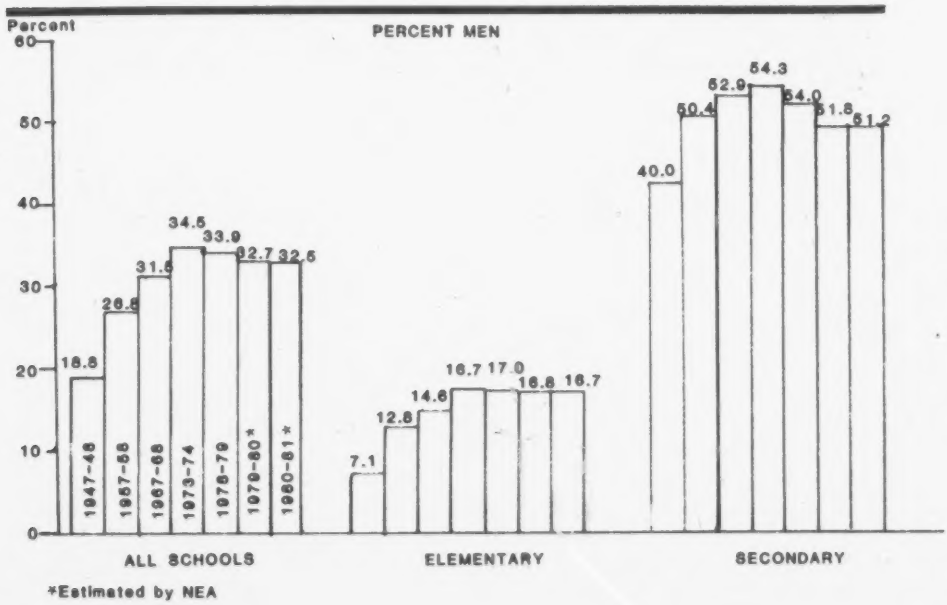
PERCENTAGE DISTRIBUTION OF FULL TIME TEACHERS IN PUBLIC SCHOOLS, 1979

Level	White	Black	Hispanic	Asian	Am. Indian
Elementary	85.8	10.9	2.3	0.6	0.2
Secondary	88.9	8.6	1.8	0.4	0.2

SOURCE: Digest of Education Statistics, 1981, National Center for Education Statistics; Estimates of School Statistics, 1980-81, National Education Association

TABLE 5-33

MEN AS A PERCENT OF ALL CLASSROOM TEACHERS, SELECTED YEARS 1948-1981



SOURCE: Weiss, Iris R., Report of the 1977 National Survey of Science, Mathematics, and Social Studies Education, p. 141, National Science Foundation, SE-78-72, reprinted from Science Education Databook, SE-80-3, NSF

TABLE 5-34

PERCENT OF MALE AND FEMALE TEACHERS OF SCIENCE, MATHEMATICS, AND SOCIAL STUDIES, BY GRADE RANGE

Grade Range	*Mathematics*			*Science*			*Social Studies*			*Total*		
	Male	Female	Unknown	Male	Female	Unknown	Male	Female	Unknown	Male	Female	Unknown
K-3 (N = 838)	6	94	0	2	98	0	3	96	1	4	96	0
4-6 (N = 829)	21	76	2	33	67	0	19	79	1	25	74	1
7-9 (N = 1538)	54	46	0	62	38	0	62	38	0	59	41	0
10-12 (N = 1624)	68	32	0	74	24	2	75	24	1	73	26	1
Sample N		1672			1679			1478			4829	

SOURCE: Digest of Education Statistics, 1982, National Center for Education Statistics, NCES 82-407

TABLE 5-35

NUMBER AND EMPLOYMENT STATUS OF STAFF MEMBERS IN NONCOLLEGIATE POSTSECONDARY SCHOOLS OFFERING OCCUPATIONAL PROGRAMS, BY TYPE AND CONTROL[1], 1979-80

Type and control of school	Total staff		Instructional staff		Managerial staff		Clerical staff	
	Number	Percent female	Number	Percent female	Number	Percent female	Number	Percent female
1	2	3	4	5	6	7	8	9
Total	**88,727**	**54.4**	**58,760**	**49.9**	**15,735**	**48.0**	**14,233**	**81.0**
Vocational/technical	29,265	41.9	20,452	35.3	3,650	34.0	5,163	73.8
Technical institute	2,865	34.3	1,277	10.4	818	26.4	770	82.3
Business/office	17,220	60.6	10,210	56.1	4,304	55.0	2,705	87.1
Cosmetology/barber	9,943	77.0	7,636	77.5	1,329	67.0	978	86.0
Flight	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]
Trade	9,326	30.4	5,018	13.0	2,470	33.6	1,838	74.8
Arts/design	4,573	49.0	3,128	43.1	764	52.0	681	72.3
Hospital	10,913	78.7	7,812	78.3	1,650	69.7	1,451	98.0
Allied health	4,624	70.7	3,227	68.9	749	60.7	647	91.4
Other	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]
Public	**28,586**	**44.2**	**20,973**	**39.2**	**3,045**	**32.0**	**4,568**	**75.2**
Vocational/technical	25,313	40.7	18,521	35.3	2,714	28.9	4,078	73.3
Technical institute	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]
Business/office	58	47.7	28	47.6	25	36.8	5	100.0
Cosmetology/barber	24	66.7	16	100.0	8	.0	0	.0
Flight	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]
Trade	375	34.1	207	12.7	25	4.5	143	70.4
Arts/design	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]
Hospital	1,344	75.8	1,006	74.3	175	61.4	164	100.0
Allied health	1,472	77.6	1,196	74.4	99	75.4	178	100.0
Other	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]
Private	**57,139**	**59.3**	**37,134**	**55.9**	**11,770**	**53.5**	**8,235**	**84.0**
Vocational/technical	2,801	43.8	1,765	33.2	649	55.5	387	72.8
Technical institute	1,837	24.0	1,093	4.6	466	34.4	278	82.7
Business/office	16,810	60.7	10,113	56.2	4,091	55.7	2,606	86.9
Cosmetology/barber	9,918	77.1	7,620	77.5	1,321*	67.4	978	86.0
Flight	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]
Trade	8,678	29.5	4,696	12.6	2,384	33.7	1,598	74.0
Arts/design	4,480	48.9	3,095	43.3	742	52.6	643	71.4
Hospital	9,568	79.1	6,806	78.9	1,475	70.6	1,287	97.7
Allied health	3,046	66.6	1,947	64.4	643	58.0	457	88.1
Other	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]
Correspondence	**3,002**	**59.3**	**853**	**52.1**	**919**	**29.8**	**1,430**	**81.6**
Vocational/technical	1,152	64.3	166	62.0	288	34.4	698	77.5
Technical institute	1,027	52.7	184	44.7	352	15.9	491	82.1
Business/office	352	56.1	69	44.4	188	42.4	94	91.9
Cosmetology/barber	0	0	0	0	0	0	0	0
Flight	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]
Trade	273	54.3	115	27.9	61	39.0	97	95.3
Arts/design	93	54.8	33	33.3	22	31.8	38	86.8
Hospital	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]
Allied health	105	95.2	85	95.3	8	100.0	12	91.7
Other	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]

[1] Data include the 50 States, the District of Columbia, and Puerto Rico.
[2] Data not available.
NOTE.—Because of rounding, details may not add to totals.

CHAPTER 6

PHYSICAL, MATHEMATICAL, AND COMPUTER SCIENCES

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FIELD: Physical Sciences and Mathematics

SOURCE: Tables throughout Professional Women & Minorities

TABLE 6-1

PROPORTIONS OF WOMEN IN THE PHYSICAL AND MATHEMATICAL SCIENCES, SUMMARY TABLE

	CHEMISTRY		PHYSICS		ASTRONOMY		GEOSCIENCES		COMPUTER SCI.		MATHEMATICS		STATISTICS	
	1960-77	1981	1960-77	1981	1960-77	1981	1960-77	1981	1965-77	1981	1960-77	1981	1960-77	1981
Degrees Granted														
Bachelor's	19.6	29.9	6.4	12.4	15.2	19.4	12.7	25.0	16.4	32.5	36.6	42.8	21.7	42.0
Master's	20.0	28.5	5.8	8.7	12.1	13.7	9.5	22.9	11.4	23.0	26.2	34.8	18.0	30.8
Ph.D.'s	8.1	15.2	2.8	7.1	7.6	10.4	3.7	10.2	5.8	9.9	7.8	15.8	8.0	15.3
	1972	1980	1972	1978			1970	1978	1970	1980	1970	1978	1970	1978
General Labor Force	13.3	20.3	4.1	2.7			7.1	10.6	11.1	25.7	11.4	20.3	11.4	18.5
	1970	1981	1971	1981	1973		1973	1981	1970	1981	1970	1981	1970	1981
Doctoral Labor Force	6.5	7.3	1.7	3.1	9.6		2.8	5.0	6.9	8.2	6.5	8.5	5.4	11.2
Academic Labor Force	1970-71	1980-81	1971-72	1980-81	1972-73	1980-81	1964-65	1979-81	1970	1980-81	1975-76	1980-81	1970	1978
Total	1.5	12.8	3.2	4.4	4.6	8.8	1.2	7.5	12.2	16.2	9.2	16.4	9.4	18.2
Professor		4.3	2.4	1.1	2.4	4.0	1.0	1.0		2.4	4.3	4.8		3.0
Assoc. Professor		8.3	2.7	2.5	2.7	2.0	0.7	1.5		2.2	6.4	5.3		4.1
Ass't. Professor		12.3	3.3	5.3	3.3	11.0	1.7	7.9		11.9	12.4	10.5		13.6
	1972	1980	1972	1980	1972	1980	1972	1980	1972	1980	1970	1980	1970	1980
Federal Labor Force	14.9	18.3	2.3	3.2	3.6	5.1	3.7	9.6	19.0	23.3	9.0	21.6	13.3	28.9

TABLE 6-2

PROPORTION OF MINORITIES IN THE PHYSICAL AND MATHEMATICAL SCIENCES, SUMMARY TABLE

	BLACK		HISPANIC		AMERICAN INDIAN		ASIAN	
	1975-76	1981	1975-76	1981	1975-76	1981	1975-76	1981
Degrees Granted								
Bachelor's	2.9	3.8	1.3	1.7	0.3	0.3	1.5	2.5
Master's	2.4	2.0	1.0	1.0	0.2	0.2	2.6	2.9
Doctorate	0.9	1.0	0.8	0.7	0.2	0.1	2.5	3.4
	1970	1980	1970	1980	1970	1980	1970	1980
General Labor Force	3.2	2.3	1.6	2.2	0.1	0.2	1.9	4.0
	1973	1981	1973	1981	1973	1981	1973	1981
Doctoral Labor Force	0.8	1.0	0.6	0.3	0.0	0.4	4.7	8.6
	1978	1979	1978	1979	1978	1979	1978	1979
Federal Labor Force	4.1	3.7	1.0	1.0	0.1	0.2	2.2	2.6
		1981		1979		1981		1981
Academic Labor Force (Ph.D. Only)		1.2		0.7		0.6		7.4

FIELD: Physical Sciences

SOURCE: Federal Civilian Workforce Statistics, Equal Employment Opportunity Statistics, U.S. Office of Personnel Management, AR-80-71, Nov. 1980

TABLE 6-3

NUMBER AND PERCENT OF FEDERAL WORKERS EMPLOYED IN THE PHYSICAL SCIENCES BY OCCUPATIONAL TITLE, SEX AND MINORITY STATUS, NOVEMBER 1980

OCCUPATIONAL TITLE	ALL EMPLOYEES			TOTAL MINORITY				BLACK		HISPANIC		AM. INDIAN		ASIAN		ALL OTHERS	
	Total	Women	% W	Total	%	Women	% W	No.	% B	No.	% H	No.	% I	No.	% A	No.	% O
General Physical Science	4,766	384	8.1	275	5.8	39	0.8	159	3.3	41	0.9	4	0.1	71	1.5	4,491	94.2
Health Physics	451	31	6.9	35	7.8	4	0.9	19	4.2	4	0.9	2	0.4	10	2.2	416	92.2
Physics	4,575	149	3.3	223	4.9	14	0.3	74	1.6	37	0.8	6	0.1	106	2.3	4,352	95.1
Physical Science Technician	3,864	906	23.4	617	16.0	191	4.9	462	12.0	95	2.5	11	0.3	49	1.3	3,247	84.0
Geophysics	528	16	3.0	29	5.5	0	0.0	6	1.1	9	1.7	3	0.6	11	2.1	499	94.5
Hydrology	2,020	103	5.1	78	3.9	10	0.5	13	0.6	39	1.9	5	0.2	21	1.0	1,942	96.1
Hydrologic Technology	1,417	190	13.4	128	9.0	26	1.8	54	3.8	58	4.1	11	0.8	5	0.4	1,289	91.0
Chemistry	7,996	1,477	18.5	1,092	13.7	294	3.7	558	7.0	112	1.4	14	0.2	408	5.1	6,904	86.3
Metallurgy	541	12	2.2	48	8.9	1	0.2	8	1.5	11	2.0	0	0.0	29	5.4	493	91.1
Astronomy & Space Science	562	27	4.8	26	4.6	3	0.5	7	1.2	5	0.9	2	0.4	12	2.1	536	95.4
Meteorology	2,059	63	3.1	128	6.2	17	0.8	48	2.3	32	1.6	2	0.1	46	2.2	1,931	93.8
Meteorological Technology	2,287	149	6.5	173	7.6	17	0.7	84	3.7	51	2.2	20	0.9	18	0.8	2,114	92.4
Geology	2,447	235	9.6	63	2.7	8	0.3	17	0.7	18	0.7	12	0.5	18	0.7	2,382	97.3
Oceanography	799	63	7.9	48	6.0	9	1.1	29	3.6	8	1.0	1	0.1	10	1.3	751	94.0
Navigational Information	500	58	11.6	41	8.2	11	2.2	29	5.8	10	2.0	1	0.2	1	0.2	459	91.8
Cartography	4,366	692	15.8	629	14.4	139	3.2	435	10.0	140	3.2	7	0.2	47	1.1	3,737	85.6
Cartographic Technician	2,270	645	28.4	412	18.1	105	4.6	199	8.8	146	6.4	26	1.1	41	1.8	1,858	81.9
Geodesy	309	26	8.4	27	8.7	9	2.9	20	6.5	4	1.3	1	0.3	2	0.6	282	91.3
Land Surveying	391	7	1.8	17	4.3	0	0.0	2	0.5	8	2.0	7	1.8	0	0.0	374	95.7
Geodetic Technician	100	27	27.0	11	11.0	6	6.0	9	9.0	2	2.0	0	0.0	0	0.0	89	89.0
Forest Products Technician	111	3	2.7	4	3.6	0	0.0	0	0.0	1	0.9	0	0.0	3	2.7	107	96.4
Food Technology	186	44	23.7	21	11.3	6	3.2	10	5.4	0	0.0	0	0.0	11	5.9	165	88.7
Textile Technology	92	25	27.2	2	2.2	1	1.1	2	2.2	0	0.0	0	0.0	0	0.0	90	97.8
Photographic Technician	74	1	1.4	2	2.7	0	0.0	1	1.4	1	1.4	0	0.0	0	0.0	72	97.3
Document Analysis	74	23	31.1	4	5.4	2	2.7	3	4.1	0	0.0	0	0.0	1	1.4	70	94.6
Phys. Science Student Trainee	361	120	33.2	62	17.2	25	6.9	40	11.1	15	4.2	1	0.3	6	1.7	299	82.8

* Less than 0.05

FIELD: Physical Sciences

SOURCE: Foreign Participation in U.S. Science and Engineering Education and Labor Markets, Special Report, NSF 81-316, National Science Foundation, September 1981 and Summary Report, 1980 and 1981 Doctorate Recipients from United States Universities, National Research Council

TABLE 6-4

NUMBER OF PH.D. RECIPIENTS IN THE PHYSICAL SCIENCES BY TYPE OF CITIZENSHIP, 1960 - 1981

YEAR	Total	U.S.	Foreign			Citizenship not Known
			Total	Immigrants	Non-Immigrants	
1960	1,861	1,619	229	51	178	13
1961	1,993	1,696	269	48	221	28
1962	2,097	1,812	262	32	230	23
1963	2,428	2,045	333	55	278	50
1964	2,527	2,130	343	74	269	54
1965	2,865	2,418	411	85	326	36
1966	3,059	2,526	446	88	358	87
1967	3,504	2,891	540	124	416	73
1968	3,671	3,073	527	130	397	71
1969	3,919	3,251	581	170	411	87
1970	4,404	3,631	709	275	434	64
1971	4,501	3,689	737	330	407	75
1972	4,233	3,348	819	373	446	66
1973	4,021	3,098	856	348	508	67
1974	3,709	2,743	809	302	507	157
1975	3,631	2,734	813	269	544	84
1976	3,442	2,619	765	247	518	58
1977	3,410	2,623	720	213	507	67
1978	3,234	2,494	670	206	464	70
1979	3,321	2,570	685	199	486	66
1980	3,151	2,393	682	176	506	76
1981	3,208	2,419	683	160	523	106

FIELD: Chemistry

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade, National Research Council, March 1973; Doctorate Recipients from United States Universities Summary Reports, 1972, 1973, 1974, 1975, 1976, 1977, 1978 1979, 1980 and 1981; National Research Council

TABLE 6-5

DOCTORATES AWARDED FROM 1920 TO 1981 BY SUBFIELD OF DOCTORATE AND SEX

	CY1920-FY1972			FY1973-FY1974			FY1975-FY1976			FY1977-FY1978			FY1979-FY1980			FY1981		
	Total	Women	% Women	Total	Women	% Women	Total	Women	% Women	Total	Women	% Women	Total	Women	% Women	Total	Women	% Women
Chemistry Subtotal	42,190	2,550	6.0	3,641	353	9.7	3,345	378	11.3	3,115	376	12.1	3,105	475	15.3	1,611	235	14.6
Analytical Chem.	1,883	122	6.5	273	15	5.5	291	22	7.5	351	30	8.5	391	50	12.8	229	30	13.1
Inorganic Chem.[1]	2,880	238	8.3	465	61	13.1	454	59	12.9	399	56	14.0	384	67	17.4	188	35	18.6
Organic Chem.[1]	11,065	633	5.7	1,266	96	7.6	1,095	86	7.8	931	103	11.1	952	128	13.4	490	60	12.2
Nuclear Chem.[2]	364	21	5.8	56	3	5.3	46	2	4.3	37	8	21.6	28	2	7.1	12		
Physical Chem.	7,291	490	6.7	863	100	11.6	746	107	14.3	650	84	12.9	607	108	17.8	275	51	18.5
Theoretical Chem.[2]	491	48	10.0	108	13	12.0	93	15	16.1	83	11	13.3	97	10	10.3	33	6	18.2
Agric. & Food Chem.	925	75	8.1	22	3	13.6	22	3	13.6	14	2	14.3	11	2	18.2			
Pharmaceutical Chem.	914	43	4.7	112	12	10.7	121	18	14.8	101	10	9.9	95	21	22.1	52	5	9.6
Polymer Chem.[3]				49	2	4.1	81	5	6.1	111	6	5.4	128	10	7.8	61	4	6.6
Chemistry, General[4]	3,798	300	7.9	301	30	10.0	313	40	12.7	311	49	15.8	288	54	18.6	197	26	13.2
Chemistry, Other	12,579	579	4.6	140	18	12.9	123	24	19.5	127	17	13.4	124	23	18.5	74	18	24.3

[1] Broken out into "basic" and "applied" in 1960. This distinction dropped in 1962.
[2] Added in 1960.
[3] Subfields were not specified until FY 1958. Except for a few cases in earlier years, all doctorates were included in the "general" classifications of their respective fields.
[4] Added in 1973.

FIELD: Chemistry

SOURCE: Earned Degrees Conferred Series, 1947-48 through 1980-81, U. S. Office of Education (NCES)

TABLE 6-6

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1947-48 - 1980-81

	BACHELOR'S			MASTER'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1947-48 thru 1959-60-	94,601	17,646	18.6	16,425	2,136	13.0
1960-61 thru 1969-70	98,165	18,651	19.0	17,174	3,251	18.9
1970-71	11,183	2,095	18.7	2,253	487	21.6
1971-72	10,721	2,120	19.8	2,259	505	22.4
1972-73	10,226	1,967	19.2	2,230	467	20.9
1973-74	10,525	2,112	20.1	2,138	474	22.2
1974-75	10,649	2,385	22.4	2,006	416	20.7
1975-76	11,107	2,497	22.5	1,796	383	21.3
1976-77	11,215	2,556	22.8	1,767	443	25.1
1977-78	11,474	2,881	25.1	1,892	445	23.5
1978-79	11,643	3,113	26.7	1,765	447	25.3
1979-80	11,446	3,277	28.6	1,733	447	25.8
1980-81	11,347	3,394	29.9	1,654	470	28.4
TOTAL	314,302	64,694	20.6	55,092	10,371	18.8

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade and Doctorate Recipients from United States Universities, Summary Reports 1971-1981, National Research Council.

TABLE 6-7

DOCTORAL DEGREES BY SEX, 1920-1981

	Total Both Sexes	Women Only	% Women
CY 1920 thru FY 1959*	21,179	1,061	5.0
FY 1960 thru FY 1969	14,562	931	6.4
FY 1979-72	6,449	558	8.7
FY 1973	1,849	179	9.7
FY 1974	1,792	174	9.7
FY 1975	1,762	192	10.9
FY 1976	1,623	189	11.6
FY 1977	1,570	180	11.5
FY 1978 -	1,545	196	12.7
FY 1979	1,567	220	14.0
FY 1980	1,538	255	16.6
FY 1981	1,611	235	14.6
TOTAL	57,047	4,370	7.7

*Data are aggregated on a calendar year (CY) basis from 1920 to 1957 and on a fiscal year (FY) basis from 1958 (July 1, 1957 to June 30, 1958) to the present.

FIELD: Biochemistry

SOURCE: Earned Degrees Conferred Series, 1947-48 through 1980-81, U.S. Office of Education (NCES)

TABLE 6-8

DEGREES AWARDED, BY SEX AND LEVEL OF DEGREE, 1947-48 - 1980-81

	BACHELOR'S			MASTER'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1947-48 thru 1959-60	1,965	284	14.4	1,748	394	22.1
1960-61 thru 1969-70	2,509	673	26.8	2,235	685	30.6
1970-71	568	138	24.3	251	99	39.4
1971-72	699	175	25.0	252	90	35.7
1972-73	872	195	22.4	270	74	27.4
1973-74	1,101	254	23.1	249	65	26.1
1974-75	1,355	359	26.5	270	77	28.5
1975-76	1,622	480	29.6	254	72	28.3
1976-77	1,693	495	29.2	314	104	34.2
1977-78	1,752	517	29.5	319	105	32.9
1978-79	1,799	591	32.9	301	131	43.5
1979-80	1,686	596	35.4	268	98	36.6
1980-81	1,837	656	35.7	258	90	34.9
TOTAL	19,458	5,413	27.8	6,989	2,084	29.8

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade and Doctorate Recipients from United States Universities, Summary Reports 1971-1981, National Research Council

TABLE 6-9

DOCTORAL DEGREES BY SEX, 1920-1981

	Total Both Sexes	Women Only	% Women
CY 1920 thru FY 1959*	3,544	484	13.7
FY 1960 thru FY 1969	4,241	713	16.8
FY 1970-72	1,815	322	17.7
FY 1973	636	129	20.3
FY 1974	606	147	24.3
FY 1975	620	147	23.7
FY 1976	616	141	22.9
FY 1977	608	135	22.2
FY 1978	607	146	24.0
FY 1979	600	156	26.0
FY 1980	672	188	28.0
FY 1981	644	189	29.3
Total	15,209	2,897	19.0

*Data are aggregated on a calendar year (CY) basis from 1920 to 1957 and on a fiscal year (FY) basis from 1958 (July 1, 1957 to June 30, 1958) to the present.

FIELD: Chemistry

SOURCE: American Chemical Society, Committee on Professional Training

TABLE 6-10

WOMEN CHEMISTRY GRADUATES BY DEGREE LEVEL, 1971-1982

YEAR	B. S. (ACS Certified)			B. S. (Not Certified)			M. S.			Ph.D.		
	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W
1971	3,708	592	16.0	4,248	744	17.5	1,941	443	22.8	2,097	177	8.4
1972	3,424	587	17.1	4,484	819	18.3	2,019	470	23.3	1,929	207	10.7
1973	3,835	687	17.9	4,225	755	17.9	2,005	439	21.9	1,880	182	9.7
1974	3,844	758	19.7	4,868	948	19.5	1,867	430	23.0	1,732	181	10.4
1975	3,897	794	20.4	5,187	1,110	21.4	1,814	401	22.1	1,781	208	11.7
1976	4,103	855	20.8	5,813	1,332	22.9	1,676	373	22.3	1,622	202	12.5
1977	4,219	949	22.3	5,988	1,355	22.6	1,688	403	23.9	1,563	189	12.1
1978	4,260	995	23.4	6,090	1,540	25.3	1,798	434	24.1	1,532	214	14.0
1979	4,424	1,107	25.0	6,027	1,691	28.1	1,716	448	26.1	1,532	243	15.9
1980	4,170	1,152	27.6	6,000	1,658	27.6	1,698	419	24.7	1,561	274	17.6
1981	4,337	1,223	28.2	6,116	1,805	29.5	1,609	451	28.0	1,613	255	15.8
1982	4,179	1,284	30.7	5,687	1,721	30.3	1,645	491	29.8	1,683	272	16.2

SOURCE: Professionals in Chemistry 1979-80 and 1981-82, American Chemical Society, March 1981 and March 1983

TABLE 6-11

DEGREES GRANTED IN CHEMISTRY BY MINORITY STATUS AND DEGREE LEVEL, 1973-74 - 1980-81

Degree Level and Academic Year	Number of Degrees Granted	PERCENT GRANTED TO MINORITIES AND NON-U.S. CITIZENS				
		Black	American Indian	Asian/ Pacific Islander	Hispanic	Non-U.S. Citizen
Bachelor's						
1973-74	10,525	1.9	0.2	2.0	1.1	2.0
1974-75	10,649	1.4	0.1	2.0	0.9	1.8
1975-76	11,107	1.8	0.2	1.5	1.2	1.2
1976-77	11,322	1.8	0.3	2.2	1.4	1.9
1977-78	11,474	1.6	0.1	2.5	0.8	2.0
1978-79	11,643	1.6	0.2	2.4	1.3	2.3
1979-80	11,860	2.0	0.3	2.0	1.5	2.9
1980-81	11,347	2.7	0.4	2.8	1.7	2.3
Master's						
1973-74	2,138	2.6	0.0	1.3	0.0	13.4
1974-75	2,006	1.4	0.5	1.9	0.3	12.1
1975-76	1,796	2.7	0.0	2.1	1.1	9.9
1976-77	1,775	1.9	0.3	1.4	0.5	11.7
1977-78	1,892	3.5	0.3	1.0	0.6	12.6
1978-79	1,765	1.5	1.1	3.4	2.6	10.8
1979-80	1,820	1.3	0.6	4.5	1.3	10.3
1980-81	1,654	3.5	0.0	3.5	0.0	15.0
Ph.D.						
1973-74	1,828	1.2	0.2	0.8	0.8	12.7
1974-75	1,824	1.1	0.2	0.7	0.4	11.1
1975-76	1,623	0.6	0.0	2.8	0.8	12.4
1976-77	1,571	1.6	0.2	1.2	1.2	12.4
1977-78	1,525	2.8	0.3	1.8	1.0	12.2
1978-79	1,518	2.0	1.4	2.2	0.8	11.4
1979-80	1,550	0.6	0.0	2.8	0.6	10.1
1980-81	1,622	1.2	0.4	3.1	0.4	11.7

FIELD: Chemistry

SOURCE: 1980 Census of Occupations, Bureau of the Census

TABLE 6-12

CHEMISTS** IN ACADEMIC AND OTHER EMPLOYMENT BY SEX, RACE/ETHNICITY

	Total		Post-Secondary Teachers		All Other	
	No.	%	No.	%	No.	%
TOTAL	110,621	100.00	8,382	100.00	102,239	100.00
MALES	88,370	79.89	6,671	79.59	81,699	79.91
White*	76,765	69.39	6,040	72.06	70,725	69.18
Black*	3,719	3.36	148	1.77	3,571	3.49
Indian/Alaskan Native*	160	0.14	15	0.18	145	0.14
Asian/Pacific Isl.*	5,673	5.13	351	4.19	5,322	5.21
Other Race*	142	0.13	0	0.00	142	0.14
Hispanic	1,911	1.73	117	1.40	1,794	1.75
FEMALES	22,251	20.11	1,711	20.41	20,540	20.09
White*	17,830	16.12	1,531	18.27	15,849	15.50
Black*	1,514	1.37	58	0.69	1,456	1.42
Indian/Alaskan Native*	56	0.05	0	0.00	56	0.05
Asian/Pacific Isl.*	2,431	2.22	83	0.99	2,348	2.30
Other Race*	39	0.04	0	0.00	39	0.04
Hispanic	831	0.75	39	0.47	792	0.77

* Non-Hispanic
** Except Biochemists

SOURCE: Salaries 1982, American Chemical Society, June 1982

TABLE 6-13

DISTRIBUTION OF ACS MEMBER EMPLOYED CHEMISTS BY AGE, HIGHEST DEGREE AND SEX, 1982

Age Level	Bachelor's		Master's		Ph. D.	
	Men	Women	Men	Women	Men	Women
20 - 24	5.4	20.6	0.6	1.6	0.1	0.0
25 - 29	16.1	30.8	10.4	21.7	5.7	12.6
30 - 34	12.4	14.9	14.9	19.6	13.2	21.2
35 - 39	9.0	10.1	13.3	16.0	18.3	21.2
40 - 44	9.1	8.3	11.0	12.5	17.5	15.6
45 - 49	8.4	5.1	10.2	8.4	12.8	7.8
50 - 54	12.3	3.3	13.5	6.3	12.3	7.6
55 - 59	13.2	5.3	13.9	7.3	10.0	7.2
60 - 64	11.6	1.3	9.5	4.9	7.5	3.5
65 - 69	1.9	0.2	2.1	0.8	2.0	1.9
70 and over	0.1	0.0	0.0	0.3	0.1	0.6
No Response	0.4	0.2	0.6	0.5	0.5	0.8
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0

FIELD: Chemistry

SOURCE: 1976, 1978 and 1979 Report of Chemists' Salaries and Employment Status and Salaries 1981, 1982, Office of Manpower Studies, American Chemical Society, July 1976, June 1978, July 1979, July 1981 and June 1982

TABLE 6-14

DISTRIBUTION OF ACS CHEMISTS BY DEGREE AND MINORITY CLASSIFICATION, 1976, 1978, 1979, 1981 AND 1982

MINORITY CLASSIFICATION	1976				1978				1979				1981				1982			
	B.S.	M.S.	Ph.D.	Total	B.S.	M.S.	Ph.D.	Total	B.S.	M.S.	Ph.D.	Total	B.S.	M.S.	Ph.D.	Total	B.S.	M.S.	Ph.D.	Total
Black	1.2	1.8	1.0	1.2	1.2	1.5	0.8	1.0	1.1	1.6	0.9	1.1	1.4	1.7	0.9	1.2	1.1	1.2	0.8	1.0
American Indian	0.2	0.0	0.2	0.2	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.2
Asian	2.1	2.8	4.2	3.3	2.0	4.1	6.3	4.7	2.2	3.1	7.3	5.2	2.4	4.4	7.3	5.3	2.4	4.4	7.4	5.5
Hispanic	0.7	0.8	0.5	0.6	0.8	0.9	0.7	0.7	0.7	0.6	0.7	0.7	0.7	0.7	0.5	0.6	0.7	1.2	0.6	0.7
All Minorities	4.2	5.4	5.9	5.3	4.1	6.7	7.9	6.5	4.2	5.5	9.1	7.2	4.7	7.0	8.8	7.2	4.4	6.9	9.0	7.4
Non-Minority	95.8	94.6	94.1	94.7	95.9	93.3	92.2	93.5	94.4	92.8	89.3	91.2	94.1	91.9	90.3	91.2	94.7	92.1	89.6	91.2

TABLE 6-15

DISTRIBUTION OF ACS CHEMISTS BY SEX AND MINORITY CLASSIFICATION, 1976, 1978, 1979, 1981 AND 1982*

MINORITY CLASSIFICATION	1976		1978		1979	1981			1982		
	Men	Women	Men	Women	Total	Men	Women	Total	Men	Women	Total
Black	1.0	2.8	1.0	1.3	1.1	0.9	3.6	1.2	0.9	1.3	1.0
American Indian	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.2	0.1	0.2
Asian	3.0	6.9	4.5	6.2	5.1	5.2	6.7	5.3	5.3	7.4	5.5
Hispanic	0.6	0.9	0.7	0.9	0.7	0.6	0.9	0.6	0.7	0.8	0.7
All Minorities	4.8	10.7	6.3	8.5	7.2	7.6	12.2	8.8	7.1	9.6	7.4
Non-Minority	95.2	89.3	93.6	91.6	91.3	92.4	87.8	91.2	91.9	89.8	91.2

* Includes only ACS members who responded to survey.

Note: Totals may not add to 100% due to no responses.

FIELD: Chemistry

SOURCE: Salaries 1982, American Chemical Society, July 1982

TABLE 6-16

ACS MEMBER CHEMISTS EMPLOYED FULL TIME IN PRIVATE INDUSTRY BY WORK FUNCTION, HIGHEST DEGREE AND SEX, 1982

Work Function	B.S.			M.S.			Ph.D.		
	Total	Women	% W	Total	Women	% W	Total	Women	% W
Management R & D	161	14	8.7	122	9	7.4	592	21	3.5
Basic Research	104	42	40.4	89	19	21.3	380	31	8.2
Applied R & D	517	92	17.8	385	58	15.1	958	56	5.8
Management Non-R & D	130	10	7.7	71	2	2.8	96	1	1.0
Marketing	169	21	12.4	93	10	10.8	65	4	6.2
Prod. & Quality Control	325	59	18.2	116	14	12.1	77	5	6.5
Forensic Analysis	67	17	25.4	36	8	22.2	28	4	14.3
Writing/Editing	19	11	57.9	17	11	64.7	11	2	18.2
Data Processing	4	0	0.0	8	4	50.0	6	0	0.0
Consulting	16	2	12.5	13	1	7.7	14	2	14.3
Other	30	7	23.3	25	5	20.0	32	3	9 4
No Response	130	19	14.6	59	5	8.5	134	7	5.2
TOTAL	1,672	294	17.6	1,034	146	14.1	2,393	136	5.7

TABLE 6-17

ACS MEMBER CHEMISTS EMPLOYED FULL TIME IN PRIVATE INDUSTRY BY WORK SPECIALTY, HIGHEST DEGREE AND SEX, 1982

Chemistry Work Specialty	B.S.			M.S.			Ph.D.		
	Total	Women	% W	Total	Women	% W	Total	Women	% W
Biochemistry	23	8	34.8	31	6	19.4	92	16	17.4
Agricul/Food	89	20	22.5	51	4	7.8	102	2	2.0
Analytical	541	109	20.1	270	46	17.0	358	23	6.4
Environmental	89	14	15.7	58	6	10.3	66	8	12.1
Organic	209	27	12.9	148	9	6.1	526	23	4.4
Inorganic	68	9	13.2	37	1	2.7	124	5	4.0
Pharm/Med/Clinical	115	27	23.5	122	30	24.6	269	22	8.2
Physical	43	8	18.6	21	1	4.8	191	8	4.2
Theoretical	0	0	0.0	1	1	100.0	5	0	0.0
Polymer/Macromolecular	273	33	12.1	165	25	15.2	472	17	3.6
Other	222	39	17.6	130	17	13.1	188	12	6.4
TOTAL	1,672	294	17.6	1,034	146	14.1	2,393	136	5.7

FIELD: Chemistry

SOURCE: Women Chemists 1980, American Chemical Society, September 1981

TABLE 6-18

DISTRIBUTION OF FULL-TIME EMPLOYED ACADEMIC PH.D. ACS MEMBER CHEMISTS BY SEX AND RANK

RANK	% MEN	% WOMEN
Professor	53.8	13.2
Associate Professor	22.4	25.3
Assistant Professor	15.6	41.7
Instructor	2.0	49.3
Non-Faculty	3.0	10.3
Unranked	1.3	2.6
No Response	1.8	2.2
Total	100.0	100.0

TABLE 6-19

PERCENTAGE OF TENURED ACADEMIC CHEMISTS* HOLDING THE RANK OF ASSISTANT PROFESSOR OR ABOVE AT PH.D. GRANTING UNIVERSITIES BY YEARS SINCE B.S. AND SEX, 1980

TENURED	YEARS SINCE B.S.							
	5-7	8-12	13-17	18-22	23-27	28-32	33-37	38-42
Women	0.0	1.8	5.7	11.6	5.8	7.1	22.5	9.9
Men	0.0	7.2	52.2	73.3	87.8	87.0	76.1	83.5

* ACS members only

TABLE 6-20

WOMEN ON CHEMISTRY FACULTIES, 1979-1980

DEGREE GRANTED BY INSTITUTION	TOTAL FACULTY	TOTAL WOMEN	FACULTY RANK OF WOMEN			TOTAL NUMBER INSTITUTIONS IN GROUP	INSTITUTIONS WITH NO WOMEN ON CHEMISTRY FACULTY
			Professor	Associate Professor	Assistant Professor		
Ph.D. Chemistry*	4,253	132 (3.1%)	29 (22.0%)	41 (31.1%)	62 (47.0%)	188	95 (50.5%)
Ph.D. Biochemistry*	2,351	227 (9.7%)	47 (20.7%)	77 (33.9%)	103 (45.4%)	139	29 (20.9%)
M.S. - B.S. Chemistry Women's Colleges	218	107 (49.1%)	42 (40.4%)	28 (26.9%)	34 (32.7%)	64	16 (25.0%)
M.S. - B.S. Chemistry Other Colleges	5,270	398 (7.6%)	115 (28.9%)	136 (34.2%)	147 (36.9%)	831	552 (66.4%)
Total All M.S. - B.S.** Chemistry Colleges	5,488	502 (9.1%)	157 (31.2%)	164 (32.7%)	181 (36.1%)	895	568 (63.5%)

* Three institutions did not report. ** Three women were unranked.

FIELD: Physics and Astronomy

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade, National Research Council, March 1973.
Doctorate Recipients from United States Universities Summary Reports, 1972, 1973, 1974, 1975, 1976, 1977, 1978, 1979, 1980 and 1981.
National Research Council.

TABLE 6-21

DOCTORATES AWARDED FROM 1920 TO 1981 BY SUBFIELD OF DOCTORATE AND SEX

	CY1920-FY1972			FY1973-FY			FY1978			FY 1979-FY1980			FY1981		
	Total	Women	% Women	Total	Women	% Women	Total	Women	% Women	Total	Women	% Women	Total	Women	% Women
Physics & Astronomy Subtotal	23,187	610	2.6	6,601	301	4.6	1,066	52	4.9	2,093	140	6.7	1,015	73	7.2
Astronomy & Astrophysics[1]	821	89	10.8	262	32	12.2	138	7	5.1	236	21	8.9	109	11	10.1
Astronomy[1]	206	14	6.8	321	31	9.7	64	4	6.2	110	13	11.8	50	7	14.0
Astrophysics[1]	250	17	6.8	342	18	5.3	74	3	4.1	126	8	6.3	59	4	6.8
Atomic & Molecular Physics	1,650	30	1.8	602	20	3.3	88	2	2.3	141	6	4.3	65	8	12.3
Electromagnetism[2]	345	4	1.2	44	2	4.5	10	0		6	0				
Mechanics[3]	97	0		15	2	13.3									
Acoustics	187	0		59	2	3.4	14	0		36	3	8.3	13	2	15.4
Fluids[4]	347	10	2.9	106	3	2.8	13	1	7.7	29	1	3.4	14	3	21.4
Plasma Physics[5]	326	2	0.6	331	7	2.1	68	7	10.3	121	4	3.3	65	2	3.1
Optics	204	2	1.0	173	5	2.9	33	0		89	3	3.4	54	1	1.9
Thermal Physics[6]	175	6	3.4	54	3	5.3	11	0		12	0		7	0	
Elementary Particles[7]	2,425	64	2.6	760	35	4.6	135	3	2.2	236	12	5.1	117	8	6.8
Nuclear Physics[7]	48	0													
Nuclear Structure[7]	2,549	49	1.9	645	23	3.6	77	4	5.2	176	10	5.7	62	3	4.8
Solid State Physics	4,068	81	2.0	1,609	74	4.6	243	17	7.0	445	31	7.0	250	20	8.0
Theoretical Physics[8]	559	9	1.6												
Physics, General[9]	2,770	85	3.1	889	49	5.5	151	8	5.3	362	26	7.2	172	10	5.8
Physics, Other	6,157	148	2.4	637	37	5.8	85	3	3.5	204	23	11.3	87	5	5.7

[1]Broken out into two separate fields in 1968.
[2]Originally shown as "Electricity & Magnetism." Changed to "Electromagnetism" in 1966.
[3]Originally shown as "Mechanics & Heat." In 1960, it was separated into two fields, "Mechanics" and "Heat (thermal)." Dropped in 1977.
[4]Added in 1960.
[5]Added in 1968.
[6]In 1962, "Heat (thermal)" was changed to "Thermal Phenomena" and to "Thermal Physics" in 1966.
[7]In 1962, "Nuclear Physics" was separated into "Elementary Particles" and "Nuclear Structure."
[8]Dropped in 1962.
[9]Subfields were not specified until FY 1958. Except for a few cases in earlier years, all doctorates were included in the "general" classification of their respective fields.

FIELD: Astronomy

SOURCE: Earned Degrees Conferred Series, 1947-48 through 1980-81, U. S. Office of Education (NCES)

TABLE 6-22

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1947-48 - 1980-81

	BACHELOR'S			MASTER'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1947-48 thru 1959-60	286	60	21.0	197	25	12.7
1960-61 thru 1969-70	841	117	13.9	667	81	12.1
1970-71	102	8	7.8	100	12	12.0
1971-72	139	23	16.5	89	11	12.3
1972-73	110	23	20.9	89	11	12.4
1973-74	152	33	21.7	82	11	13.4
1974-75	115	20	17.4	110	14	12.7
1975-76	116	15	12.9	81	7	8.6
1976-77	122	19	15.6	68	14	20.6
1977-78	110	24	21.8	84	12	14.3
1978-79	93	20	21.5	97	15	15.5
1979-80	96	16	16.7	70	9	12.9
1980-81	98	19	19.4	51	7	13.7
TOTAL	2,380	397	16.7	1,785	229	12.8

SOURCE: Doctorates Awarded from 1920 to 1971 by subfield of Doctorate, Sex and Decade and Doctorate Recipients from United States Universities, Summary Reports 1971-1981, National Research Council.

TABLE 6-23

DOCTORAL DEGREES BY SEX, 1920-1981

	Total Both Sexes	Women Only	% Women
CY 1920 thru FY 1959*	386	61	15.8
FY 1960 thru 1969	538	35	6.5
FY 1970-72	170	12	7.0
FY 1973	64	4	6.2
FY 1974	56	5	8.9
FY 1975	60	8	13.3
FY 1976	78	7	9.0
FY 1977	63	7	11.1
FY 1978	64	4	6.3
FY 1979	58	6	10.3
FY 1980	52	7	13.5
FY 1981	50	7	14.0
TOTAL	1,639	163	9.95

*Data are aggregated on a calendar year (CY) basis from 1920 to 1957 and on a fiscal year (FY) basis from 1958 (July 1, 1957 to June 30, 1958) to the present.

FIELD: Astronomy

SOURCE: Enrollments and Degrees, American Institute of Physics, R-151.11, May 1974, R-151.13, May 1976, R-151.15, April 1978, R-151.17, March 1980 and R-151.18, February 1981, and unpublished data.

TABLE 6-24

ASTRONOMY DEGREES BY SEX, 1972-73 TO 1979-81

ACADEMIC YEAR	BACHELOR'S			MASTER'S			DOCTORATE		
	Total	Women	% W	Total	Women	% W	Total	Women	% W
1972-73	158	25	15.8	107	11	10.3	103	4	3.9
1973-74	199	35	17.6	100	12	12.0	97	9	9.3
1974-75	166	20	12.0	116	15	12.9	96	6	6.3
1975-76	177	20	11.3	88	8	9.1	81	8	9.9
1976-77	186	26	14.0	97	10	10.3	96	9	9.4
1977-78	177	25	14.1	95	9	9.5	93	5	5.4
1978-79	165	27	16.4	115	15	13.0	86	6	7.0
1979-80	165	33	20.0	81	9	11.1	106	13	12.3
1980-81	156	28	17.9	58	12	20.7	82	10	12.1

FIELD: Physics

SOURCE: Earned Degrees Conferred Series, 1947-48 through 1979-81, U.S. Office of Education (NCES)

TABLE 6-25

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1947-48 - 1979-80

	BACHELOR'S			MASTER'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1947-48 thru 1959-60	35,769	1,613	4.5	10,795	425	3.9
1960-61 thru 1969-70	49,084	2,580	5.3	18,629	883	4.7
1970-71	5,076	343	6.8	2,194	152	6.9
1971-72	4,645	323	7.0	2,035	159	7.8
1972-73	4,268	313	7.3	1,755	113	6.4
1973-74	3,962	337	8.5	1,662	136	8.2
1974-75	3,716	362	9.7	1,577	124	7.9
1975-76	3,544	388	10.9	1,451	132	9.1
1976-77	3,420	358	10.5	1,319	126	9.6
1977-78	3,330	369	11.1	1,294	123	9.5
1978-79	3,338	399	12.0	1,319	135	10.2
1979-80	3,397	434	12.8	1,192	118	9.9
1980-81	3,441	432	12.6	1,294	115	8.9
TOTAL	126,980	8,251	6.5	46,516	2,741	5.9

FIELD: Physics

SOURCE: Enrollments and Degrees, American Institute of Physics, R-151.20, February 1983

TABLE 6-26

NUMBER OF PHYSICS DEGREES GRANTED BY SEX AND MINORITY GROUP STATUS, 1981-82

Type of degree	Sex	Total no. of degrees	Black	Am. Ind.	Puerto Rican	Mex. Am.	Hispanic	Oriental	Asian Ind.	Arab	Total minorities
Bachelor's	Men	4025	96	6	3	14	24	66	8	37	254
	Women	533	26	0	0	2	2	13	3	5	51
	Total	4558	122	6	3	16	26	79	11	42	305
Master's enroute	Men	759	10	0	1	0	8	36	6	6	67
	Women	80	1	0	0	0	0	12	3	2	18
	Total	839	11	0	1	0	8	48	9	8	85
Terminal master's	Men	553	10	1	0	1	4	18	8	13	55
	Women	84	2	0	0	0	0	6	3	0	11
	Total	637	12	1	0	1	4	24	11	13	66
Doctorate	Men	849	15	1	1	1	11	56	33	14	132
	Women	63	1	0	0	0	4	8	3	0	16
	Total	912	16	1	1	1	15	64	36	14	148

Minorities in AIP surveys are defined as groups with a low representation in the physics community, but ones whose participation has aroused considerable interest.

SOURCE: Graduate Student Survey, American Institute of Physics, AIP Pub. No. R-207.11, 1982

TABLE 6-27

CHARACTERISTICS OF THE GRADUATE ASTRONOMY STUDENT POPULATION, 1980-81

Characteristics		All graduate students	First-year graduate students	Degree recipients	
				Terminal masters	Doctorate recipients
	*Total population:	686	164	24	82
	Number of respondents	510	121	10	54
Sex	Female	13%	12%	30%	6
	Male	87	88	70	94
Citizenship	U.S.	86%	85%	90%	87%
	Foreign	14	15	10	13

FIELD: Physics

SOURCE: Graduate Student Survey, American Institute of Physics, AIP Pub. No. R-207-11, February 1979; R-207.12, June 1980; R-207.13, May 1981; and R-207.14, May 1982

TABLE 6-28

GRADUATE PHYSICS STUDENTS BY MINORITY GROUP AND SEX, 1978-79, 1979-80, AND 1980-81

MINORITY GROUP	1978-79			1979-80			1980-81		
	Total	Women	% Minority	Total	Women	% Minority	Total	Women	% Minority
Black	77	7	.78	71	5	.74	94	10	.95
U.S.				50	5	.52	70	10	.71
Foreign				21	-	.22	24	-	.24
American Indian	5	2	.05	11	2	.11	12	2	.12
Puerto Rican	16	4	.16	15	4	.16	21	3	.21
Mexican American	27	3	.28	11	-	.11	15	-	.15
Other Hispanic	116	18	1.18	119	17	1.23	139	12	1.40
U.S.							18	2	.18
Foreign							121	10	1.22
Asian Indian	326	35	3.32	329	53	3.41	360	66	3.62
Oriental	633	68	6.45	648	84	6.72	700	94	7.05
U.S.	102	9	1.04	92	13	.96	88	15	.89
Foreign	531	59	5.41	556	71	5.76	612	79	6.16
Arab	146	13	1.49	169	18	1.75	171	12	1.72
Total Minority	1,346	150	13.72	1,373	183	14.23	1,512	199	15.22
Total Population	9,813	785		9,647	965		9,934		

TABLE 6-29

CHARACTERISTICS OF THE GRADUATE PHYSICS STUDENT POPULATION, 1980-81

Characteristics		All graduate students	First-year graduate students	Degree recipients: Terminal masters	Degree recipients: Doctorate recipients
*Total population:		9934	2564	577	927
Number of respondents:		6498	1402	324	625
Sex	Female	10%	12%	11%	6%
	Male	90	88	89	94
Citizenship	U.S.	73%	67%	86%	74%
	Foreign	27	33	14	26

TABLE 6-30

CHARACTERISTICS OF MINORITY GROUP PHYSICS STUDENTS, 1980-81

Characteristics		Black U.S.	Black Foreign	American Indian	Hispanic Puerto Rican	Hispanic Mexican American	Hispanic Other U.S.	Hispanic Foreign	Asian Indian	Oriental U.S.	Oriental Foreign	Arab
Total number:		70	24	12	21	15	18	121	360	88	612	171
Sex	Female	10	-	2	3	-	2	10	66	15	79	12
	Male	60	24	10	18	15	16	111	294	73	533	159
Degree status	TMS	17	4	2	3	1	6	11	14	4	48	11
	MS and PhD	42	18	8	14	9	11	77	291	63	368	134
	PhD only	11	2	2	4	5	1	33	55	21	196	26
Student status	Full-time	48	24	10	18	10	13	118	348	85	580	163
	Part-time	22	-	2	3	5	5	3	12	3	32	8
Prof'l society membership	Yes	26	3	9	3	5	3	34	86	29	97	27
	No	44	21	3	18	10	15	87	274	59	515	144
Full-time equivalent years of graduate study	≤1	14	5	2	5	3	4	20	59	21	126	16
	2	18	7	4	3	3	8	18	61	11	138	38
	3	11	4	-	5	4	2	25	64	13	92	42
	4	6	1	-	4	4	1	28	57	11	83	28
	5	7	3	1	2	-	1	15	51	16	80	28
	>6	14	4	5	2	1	2	15	68	16	93	19
Major subfields	Elem. particles	2	1	4	2	2	-	20	34	15	79	15
	Nuclear	5	4	-	1	-	1	8	41	5	43	19
	Optics	5	-	-	2	-	2	4	22	4	45	9
	Solid state	20	10	2	6	3	7	43	139	32	235	57
	Cross-discipl. areas	6	2	4	1	-	3	9	28	7	45	13
	General physics (ed)	8	-	-	-	1	1	5	5	2	22	7
Graduate degree recipients	TMS	← 12 →		1	1	0	← 8 →		4	← 20 →		7
	Doctorates	← 11 →		0	1	1	← 8 →		40	← 70 →		10

FIELD: Physics

SOURCE: "Women in Physics: Unnecessary, Injurious, and Out of Place?" by Vera Kistiakowsky, PHYSICS TODAY, February 1980

TABLE 6-31

NUMBER AND PERCENT WOMEN ON PHYSICS FACULTIES, 1971-72 AND 1978-79

TYPE OF DEPARTMENTS	No. of Depts.	Year	ALL PROFESSORS		PROFESSORS		ASSOC. PROFESSORS		ASS'T. PROFESSORS	
			No. W	% W	No. W	% W	No. W	% W	No. W	% W
Top Ten*	10	1971-72	4	0.8	2	0.6	1	1.1	1	0.9
	10	1978-79	11	2.7	3	1.0	3	5.8	5	7.7
Ph.D. Granting	158	1971-72	74	1.5	23	1.0	24	1.8	27	2.0
	212	1978-79	88	1.7	38	1.2	22	1.5	28	4.5
Masters Granting	133	1971-72	28	2.3	7	1.9	9	2.2	12	2.6
	123	1978-79	27	2.5	8	1.5	12	2.9	7	4.4
Bachelor's Granting	743	1971-72	144	5.4	55	5.8	33	4.9	56	5.2
	606	1978-79	93	3.9	29	3.2	35	3.9	39	6.9
Total All Departments	1,034	1971-72	246	2.8	85	2.4	66	2.7	95	3.3
	941	1978-79	218	2.5	75	1.7	69	2.5	74	5.5

* California Institute of Technology, Princeton, Univ. of Calif-Berkeley, Univ. of Chicago, Harvard, Cornell, Mass. Institute of Technology, Columbia, Univ. of Illinois and Stanford.

SOURCE: "Survey Compiled for the APS Committee on the Status of Women," American Physical Society, as reported in PHYSICS TODAY, February 1982

TABLE 6-32

WOMEN AS SENIOR PHYSICS FACULTY, 1980-81

University	Total	Women
Auburn University	16	1
Brooklyn College	21	1
Brown University	34	1
Bryn Mawr College	3	1
California-Irvine	21	1
California-Los Angeles	42	1
California-Riverside	18	2
California-San Diego	37	1
Chicago, University of	36	1
Cincinnati, University of	23	1
City College of CUNY	52	1
Clemson University	24	1
Connecticut, University of	26	1
Denver, University of	14	1
Florida State University	27	1
George Washington University	14	1
Georgetown University	11	1
Illinois-Chicago Circle	26	1
Illinois-Urbana	61	2
Indiana University	41	1
Johns Hopkins University	21	1
Kentucky, University of	15	1
Maryland, University of	62	1
Massachusetts Inst. of Technology	83	4
Massachusetts, University of	33	1
Minnesota, University of	38	1
Missouri-Rolla	25	2
Montana State University	14	1
North Carolina State University	25	1
Northeastern University	28	1
Oklahoma, University of	16	1
Pennsylvania, University of	36	1
Pittsburgh, University of	39	2
Polytechnic Institute of New York	16	1
Queens College of CUNY	20	1
Rhode Island, University of	15	1
Rutgers University	33	2
Southern California, University of	17	1
SUNY-Albany	23	1
SUNY-Stony Brook	49	1
Tennessee, University of	39	1
Texas-Austin	52	1
Tufts University	9	1
Utah State University	15	1
Washington, University of	42	1
Wisconsin-Madison	46	1
Total Senior Physics Faculty for above 46 Departments	1361	54
Total for 125 Departments with no women on the Senior Physics Faculty	2304	0
Total Senior Physics Faculty for 171 Departments	3665	54
Total Assistant Professors for 171 Departments	511	25
Total Physics Faculty for 171 Departments	4176	79

SOURCE: 1980 Census of Occupations, Bureau of the Census

TABLE 6-33

PHYSICISTS AND ASTRONOMERS IN ACADEMIC AND OTHER EMPLOYMENT, BY SEX, RACE/ETHNICITY

	Total		Post-Secondary Teachers		All Other	
	No.	%	No.	%	No.	%
TOTAL	27,887	100.00	5,414	100.00	22,473	100.00
MALES	26,135	93.72	4,882	90.17	21,253	94.57
White*	23,716	85.04	4,363	80.59	19,352	86.11
Black*	379	1.36	65	1.20	314	1.40
Indian/Alaskan Native*	36	0.13	6	0.11	30	0.13
Asian/Pacific Isl.*	1,455	5.22	303	5.60	1,152	5.13
Other Race*	93	0.33	12	0.22	81	0.36
Hispanic	457	1.64	133	2.4o	324	1.44
FEMALES	1,752	6.29	532	9.83	1,220	5.43
White*	1,554	5.57	452	8.35	1,102	4.90
Black*	57	0.20	16	0.30	41	0.18
Indian/Alaskan Native*	0	0.00	0	0.00	0	0.00
Asian/Pacific Isl.*	78	0.28	38	0.70	40	0.18
Other Race*	4	0.01	4	0.07	0	0.00
Hispanic	59	0.21	22	0.41	37	0.16

* Non-Hispanic

SOURCE: CSWP Gazette, Issue #9, March 1, 1983, Committee on the Status of Women in Physics, American Physical Society.

TABLE 6-34

WOMEN PHYSICISTS IN INDUSTRIAL LABS, 1982

Laboratory	Total Physicists	Women Physicists	Percent Women	Physicist Research Managers	Women Physicist Research Mgrs.	Percent Women
GTE, Waltham	51	3	5.9	7	0	0
RCA, Princeton[1]	xxx	xxx	xxx	xxx	xxx	xxx
Bell Labs Research Physics Division	152	11	7.2	5 mgrs 16 dept. heads	0 0	0 0
Exxon, Linden Corp Research Lab	37 MTS 15 temps	2 2	5.4 13.3	3	0	0
Stanford Research Institute[2]	25 PhD 7 MS 12 BS	1 0 0	4.0 0 0	xxx xxx xxx	xxx xxx xxx	xxx xxx xxx
Westinghouse [3]	xxx	xxx	xxx	xxx	xxx	xxx
GE, Schenectady R and D	92	1	1.1			
General Motors Physics Dept	36	1	2.8	3	0	0
IBM, Yorktown Hts[4]						
Ford Motor [5]	33	2	6.1	1	0	0
Xerox, Webster [6] Corp Research Cntr	45-50 MTS 6 postdoc	1 1	2 16.7			

[1] Refused to divulge information. To the best of our knowledge, there are no women physicists at RCA Laboratories.
[2] SRI refused to divulge information on managers.
[3] Refused to divulge information.
[4] Data not available at press time, but it is known that IBM has several women physicists on its technical staff.
[5] There are 2 physicist "staff scientists" among the 33 MTS and 1 is a woman.
[6] There are 3 physicist "fellows of the technical staff" among the MTS and 1 is a woman.

FIELD: Earth, Environmental and Marine Sciences

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade, National Research Council, March 1973, and Doctorate Recipients from United States Universities Summary Reports, 1972 through 1981, National Research Council.

TABLE 6-35

DOCTORATES AWARDED FROM 1920 TO 1981 BY SUBFIELD OF DOCTORATE AND SEX

	CY1920-FY1972			FY1973-FY1977			FY1978			FY1979-80			FY 1981		
	Total	Women	% Women	Total	Women	% Women	Total	Women	% Women	Total	Women	% Women	Total	Women	% Women
Earth, Environ. & Marine Sciences Subtotal	8,341	221	2.6	2,925	178	6.1	623	61	9.8	1,274	122	9.6	582	56	9.6
Mineralogy, Petrology, Geochemistry[1]	929	25	2.7	303	22	7.3	85	10	11.8	188	23	12.2	78	10	12.8
Mineralogy, Petrology[1]	214	15	7.0	236	12	5.1	34	5	14.7	80	7	8.6	30	5	16.7
Geochemistry[1]	172	10	5.8	243	17	7.0	51	5	9.8	108	16	14.8	48	5	10.4
Stratigraphy Sedimentation[2]	908	12	1.3	243	13	5.3	32	4	12.5	74	8	10.8	42	7	16.7
Paleontology[2]	499	18	3.6	193	25	13.0	31	6	19.4	57	14	24.6	19	1	5.3
Structural Geology[2]	284	6	2.1	96	4	4.2	28	4	14.3	48	3	6.3	27	1	3.7
Geophysics[3]	698	8	1.1	386	18	4.7	60	6	10.0	152	7	4.6	72	5	6.9
Geomorphology, Glacial Geo.[2]	207	5	2.4	128	4	3.1	24	1	4.2	29	4	13.8	13	2	15.4
Hydrology	127	1	0.8	103	16	15.5	31	0		48	3	6.3	21	1	4.8
Oceanology	524	11	2.1	456	34	7.5	98	8	8.2	176	19	10.8	70	7	10.0
Meteorology[7]	671	11	1.6	331	22	6.6	79	3	3.9	174	11	6.3	73	3	4.1
Appl/Econ/Petrol Geol. Geological Engineering[4]	317	1	0.3	117	3	2.6	15	1	6.7	46	1	2.2	21	0	
Fuel Technology, Petrol. Eng.[4]	57	2	3.5	40	5	12.5	2	0		35	0		21	0	
Earth Sciences, General[5]	2,372	74	3.1	201	10	5.0	45	4	8.9	85	5	5.9	46	4	8.7
Earth Sciences, Other	362	22	6.1	151	13	8.6	22	1	4.5	44	5	11.4	16	2	12.5
Marine Sciences, Other[6]							28	6	21.4	56	6	10.7	30	2	6.7
Environmental Sci., General[6]							16	2	12.5	37	2	5.4	30	3	10.0
Environmental Sci., Other[6]							29	5	17.2	56	11	19.6	24	8	33.3

[1]Originally specified as "Geochemistry." In 1962 the field was extended to include "Minerology" and "Petrology." In 1968, this specification was broken out into "Geochemistry" and Minerology, Petrology."
[2]Added in 1962.
[3]Originally specified as "Geophysics." Changed to "Solid Earth Geophysics" in 1962 and to "Solid Earth & Atmospheric Geophysics" in 1968.
[4]Added in 1960 as "Geo-engineering." In 1968 this subfield was broken out into "Applied Geology, Geological Engineering, Economic Geology" and Fuel Technology, Petroleum Engineering."
[5]Subfields were not specified until FY 1958. Except for a few cases in earlier years, all doctorates were included in the "general" classification of their respective fields.
[6] Added in 1978.
[7] Subdivided in 1976 to Atmospheric Physics & Chemistry; Atmospheric Dynamics; and Atmospheric Sciences.

FIELD: Geology and Earth Sciences

SOURCE: Earned Degrees Conferred Series, 1947-48 through 1980-81, U.S. Office of Education (NCES)

TABLE 6-36

DEGREES AWARDED, BY SEX AND LEVEL OF DEGREE, 1947-48 - 1980-81

	BACHELOR'S			MASTER'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1947-48 thru 1959-60	29,222	1,187	4.1	6,886	239	3.5
1960-61 thru 1969-70	18,293	1,657	9.1	7,583	485	6.4
1970-71	3,330	379	11.4	1,084	113	10.4
1971-72	3,861	489	12.7	1,299	150	11.5
1972-73	4,273	544	12.7	1,416	183	12.9
1973-74	4,834	800	16.5	1,604	201	12.5
1974-75	4,830	839	17.4	1,512	198	13.5
1975-76	4,864	916	18.8	1,515	218	14.4
1976-77	5,521	1,192	21.6	1,619	228	14.1
1977-78	5,885	1,318	22.4	1,760	295	16.8
1978-79	6,078	1,428	23.5	1,772	326	18.4
1979-80	5,536	1,366	24.7	1,481	295	10.9
1980-81	6,106	1,532	25.1	1,525	352	23.1
TOTAL	102,633	13,692	13.3	31,056	3,283	10.6

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade and Doctorate Recipients from United States Universities, Summary Reports 1971-81, National Research Council

TABLE 6-37

DOCTORAL DEGREES BY SEX, 1920-81

	Total Both Sexes	Women Only	% Women
CY 1920 thru FY 1959*	3,179	101	3.2
FY 1960 thru FY 1969	3,521	69	2.0
FY 1970-72	1,641	51	3.1
FY 1973	577	22	3.8
FY 1974	570	29	5.1
FY 1975	556	22	4.0
FY 1976	584	53	9.1
FY 1977	638	52	8.1
FY 1978	623	61	9.8
FY 1979	646	58	9.0
FY 1980	628	64	10.2
FY 1981	582	56	9.6
TOTAL	13,745	638	4.6

*Data are aggregated on a calendar year (CY) basis from 1920 to 1957 and on a fiscal year (FY) basis from 1958 (July 1, 1957 to June 30, 1958) to the present.

FIELD: Geosciences

SOURCE: "Student Enrollment 1972-73," Geotimes; Student Enrollment in Geoscience Departments 1975-76, 1977-78, 1978-79, 1979-80, 1980-81, American Geological Institute

TABLE 6-38

DEGREES GRANTED IN THE GEOSCIENCES BY LEVEL, SEX AND ETHNIC ORIGIN
1971-72, 1974-75, 1977-78, 1979-80 and 1980-81

	BACHELOR'S		MASTER'S		DOCTORATES		TOTAL	
	No.	%	No.	%	No.	%	No.	%
1971-72								
TOTAL	3,804	66.8	1,332	23.4	560	9.8	5,696	100.0
Women	473	12.4	146	11.0	28	5.0	647	11.4
TOTAL MINORITY	29	.76	40	3.0	3	.54	72	1.26
Blacks	13	.34	27	2.0	2	.36	42	.74
Hispanics	16	.42	12	.90	1	.18	29	.51
Asians	-	-	-	-	-	-	-	-
Am. Indians	-	-	1	.08	-	-	1	.02
1974-75								
TOTAL	3,650	68.4	1,267	23.7	416	7.8	5,333	100.0
Women	707	19.4	184	14.5	27	6.5	918	17.2
TOTAL MINORITY	68	1.86	34	2.68	6	1.44	108	2.02
Blacks	14	.38	15	1.18	-	-	29	.54
Hispanics	24	.65	4	.31	4	.96	32	.60
Asians	29	.79	15	1.18	2	.48	46	.86
Am. Indians	1	.27	-	-	-	-	1	.01
1977-78								
TOTAL -	5,982	72.6	1,799	21.8	455	5.5	8,236	100.0
Women	1,287	21.5	316	17.6	49	10.8	1,652	20.1
TOTAL MINORITY	107	1.79	21	1.17	10	2.20	138	1.68
Blacks	38	.64	5	.28	1	.22	44	.53
Hispanics	36	.60	6	.33	2	.44	44	.53
Asians	29	.49	9	.50	6	1.32	44	.53
Am. Indians	4	.07	1	.06	1	.22	6	.07
1979-80								
TOTAL	6,580	74.0	1,826	20.54	486	5.47	8,892	100.0
Women	1,643	24.97	369	20.17	49	10.08	2,061	23.18
TOTAL MINORITY	182	2.77	31	1.70	14	2.88	227	2.55
Blacks	68	1.03	4	.22	6	1.23	78	.88
Hispanics	76	1.16	9	.49	1	.21	86	.97
Asians	34	.52	18	.99	7	1.44	59	.66
Am. Indians/ Alaskan Natives	4	.06	-	-	-	-	-	-
1980-81								
TOTAL	6,879	73.36	2,014	21.48	484	5.16	9,377	100.0
Women	1,684	24.48	441	21.90	85	17.56	2,210	23.57
TOTAL MINORITY	177	2.57	36	1.79	12	2.48	225	2.40
Blacks	46	.67	3	.15	2	.41	51	.54
Hispanics	84	1.22	11	.55	3	.62	98	1.05
Asians	42	.61	20	.99	7	1.45	69	.74
Am. Indians/ Alaskan Natives	5	.07	2	.10	-	-	7	.07

FIELD: Geosciences

SOURCE: Student Enrollment in Geoscience Departments, 1978 through 1982, American Geological Institute

TABLE 6-39

ENROLLMENT IN GEOSCIENCE DEPARTMENTS BY EDUCATIONAL LEVEL, FIELD AND SEX, 1978-82

		FRESHMAN AND SOPHOMORE			JUNIOR			SENIOR			MASTER'S			DOCTORATES		
		1979-80	1980-81	1981-82	1979-80	1980-81	1981-82	1979-80	1980-81	1981-82	1979-80	1980-81	1981-82	1979-80	1980-81	1981-82
Geology	Total	8,633	9,113	10,390	6,842	7,511	8,009	7,261	8,423	8,756	4,548	4,883	5,060	1,251	1,257	1,116
	Women	1,934	2,114	2,307	1,719	1,817	2,013	1,766	2,059	2,151	1,013	1,164	1,249	238	245	223
	% W	22.4	23.2	22.2	25.1	24.2	25.1	24.3	24.4	24.6	22.3	23.8	24.7	19.0	19.5	20.0
Geophysics	Total	320	290	303	259	279	221	327	304	353	500	534	499	383	359	393
	Women	70	64	59	56	63	52	54	53	78	81	88	84	44	52	63
	% W	21.9	22.1	19.5	21.6	22.6	23.5	16.5	17.4	22.1	16.2	16.5	16.8	11.5	14.5	16.0
Oceanography, Marine Science	Total	809	433	487	343	188	198	345	240	202	818	781	740	640	681	699
	Women	147	87	112	71	40	30	75	56	36	247	227	218	123	142	160
	% W	18.2	19.2	23.0	20.7	21.3	15.1	21.7	23.3	17.8	30.2	29.1	29.5	19.2	20.9	22.9
Geological Engineering	Total	546	621	738	337	336	405	452	426	483	147	128	137	37	36	31
	Women	118	144	159	75	67	76	95	72	98	24	22	24	0	0	1
	% W	21.6	23.2	21.5	22.3	19.9	1.3	21.0	16.9	20.3	16.3	17.2	17.5	0.0	0.0	3.2
Geochemistry	Total	19	17	25	25	17	27	21	25	22	215	226	182	213	180	195
	Women	3	1	5	7	0	3	7	9	4	50	67	50	26	33	45
	% W	15.8	5.9	20.0	28.0	0.0	11.1	33.3	36.0	18.2	23.3	29.7	27.5	12.2	18.3	23.1
Mineralogy	Total	6	4	16	20	4	99	19	4	3	56	55	49	50	36	49
	Women	0	0	3	2	1	18	8	0	1	15	17	12	7	6	7
	% W	0.0	0.0	18.8	10.0	25.0	18.2	42.1	0.0	33.3	26.8	30.9	24.5	14.0	16.7	14.3
Paleontology	Total	15	8	25	17	13	89	31	8	21	141	120	94	135	96	105
	Women	4	1	7	11	5	19	10	1	6	50	43	31	29	22	31
	% W	26.7	12.5	28.0	64.7	38.5	21.3	32.3	12.5	28.6	35.5	35.8	33.0	21.5	22.9	29.5
Soil Science	Total	57	51	16	48	41	10	57	53	15	7	8	0	2	2	1
	Women	25	23	6	27	20	2	16	23	3	4	3	0	1	1	1
	% W	43.9	45.1	37.5	56.3	48.8	20.0	28.1	43.4	20.0	57.1	37.5	0.0	50.0	50.0	100.0
Environmental Science	Total	549	425	380	401	373	350	465	451	368	133	125	124	31	36	29
	Women	166	180	218	141	124	91	142	118	97	35	42	42	6	11	6
	% W	30.2	42.4	57.4	35.2	33.2	26.0	30.5	26.2	26.4	26.3	33.6	33.1	19.4	30.6	20.7
Earth Science, Teaching	Total	134	84	85	130	140	109	181	148	111	88	77	62	3	2	3
	Women	40	29	32	55	63	47	65	63	53	30	28	20	0	0	2
	% W	30.0	34.5	37.6	42.3	45.0	43.1	35.9	42.6	47.7	34.1	36.4	32.3	0.0	0.0	66.7
Earth Science, Teaching	Total	569	613	639	501	461	433	495	535	580	95	146	113	72	79	71
	Women	169	166	183	133	117	127	125	176	179	23	38	30	11	12	12
	% W	30.0	27.1	28.6	26.5	25.4	29.3	25.3	32.9	30.9	24.2	26.0	26.5	15.3	15.2	16.9
ALL FIELDS*	Total	11,761	11,795	13,238	8,990	9,454	10,059	9,744	10,738	11,046	7,004	7,370	7,349	2,877	2,810	2,759
	Women	2,699	2,833	3,120	2,315	2,336	2,504	2,376	2,652	2,727	1,616	1,794	1,825	492	530	558
	% W	22.9	24.0	23.6	25.8	24.7	24.9	24.4	24.7	24.7	23.1	24.3	24.8	17.1	18.9	20.2

* Also Includes Hydrology and Geophysical Engineering.

FIELD: Geosciences

SOURCE: Unpublished data, American Geological Institute, October 1974 and Student Enrollment in Geoscience Departments 1975-76 to 1981-82, American Geological Institute

TABLE 6-40

STUDENT ENROLLMENT IN GEOSCIENCES, BY SEX 1972-73 TO 1981-82

YEAR	BACHELOR'S			MASTER'S			DOCTORATE'S		
	Total	Women	% W	Total	Women	% W	Total	Women	% W
1972-73	19,541	2,994	15.3	4,832	646	13.4	3,045	242	7.9
1973-74	21,329	4,002	18.8	4,789	670	14.0	2,997	292	9.7
1975-76	18,439	3,913	21.2	4,588	832	18.1	2,042	221	10.8
1976-77	24,464	5,312	21.7	5,759	1,070	18.6	2,686	395	14.7
1977-78	25,399	5,672	22.3	6,245	1,209	19.4	2,598	351	13.5
1978-79	28,674	6,733	23.5	6,413	1,372	21.4	2,699	420	15.6
1979-80	30,495	7,390	24.2	7,004	1,616	23.1	2,877	492	17.1
1980-81	31,987	7,821	24.5	7,370	1,794	24.3	2,810	530	18.9
1981-82	34,343	8,351	24.3	7,349	1,825	24.8	2,759	558	20.2

TABLE 6-41

STUDENT ENROLLMENT IN GEOSCIENCES, BY MINORITY STATUS, 1972-73 TO 1981-82

MINORITY STATUS	1972-73		1973-74		1975-76		1977-78		1978-79		1979-80		1980-81		1981-82	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
H[illegible]C																
[illegible]lor's	321	1.64	265	1.24	246	1.33	263	1.04	256	.89	353	1.16	381	1.19	453	1.32
[illegible]er's	42	.87	21	.44	42	.91	22	.35	33	.51	56	.80	54	.73	64	.87
Doctorates	13	.43	11	.37	9	.44	7	.27	8	.30	11	.38	23	.82	18	.65
Total	376	1.37	297	1.02	297	1.18	292	.85	297	.79	420	1.04	458	1.09	535	1.20
BLACK																
Bachelor's	235	1.20	216	1.01	173	.93	155	.61	374	1.30	313	1.03	450	1.41	317	.92
Master's	65	1.35	58	1.21	43	.93	27	.43	29	.45	29	.41	41	.56	40	.54
Doctorates	6	.20	6	.20	10	.48	3	.12	3	.11	7	.24	9	.32	5	.18
Total	306	1.12	280	.96	226	.90	185	.54	406	1.07	349	.86	500	1.19	362	.81
ASIAN/PACIFIC ISLANDER																
Bachelor's			116	.54	76	.41	91	.36	111	.39	122	.40	170	.53	137	.40
Master's			27	.56	44	.95	24	.38	44	.69	51	.73	107	1.45	94	1.28
Doctorates			18	.60	22	1.07	21	.81	18	.67	32	1.11	69	2.46	59	2.14
Total			161	.55	142	.56	136	.40	173	.46	205	.51	346	.82	290	.65
NATIVE AMERICAN																
Bachelor's	24	.12	33	.15	18	.09	31	.12	24	.08	41	.13	35	.11	31	.09
Master's	10	.21	5	.10	2	.04	3	.05	1	.003	2	.03	3	.04	3	.04
Doctorates	2	.07	1	.03	4	.19	3	.12	2	.07	3	.10	1	.04	3	.11
Total	36	.13	39	.13	24	.09	37	.11	27	.07	46	.11	39	.09	37	.08

FIELD: Environmental Sciences

SOURCE: 1980 Census of Occupations, Special EEO File, Bureau of the Census

TABLE 6-42

ENVIRONMENTAL SCIENTISTS IN ACADEMIC AND NON-ACADEMIC EMPLOYMENT BY SEX AND RACE/ETHNICITY, 1980

	Total		Earth/Env/Marine Science Teachers		ALL OTHER					
					Geologists/ Geodicists		Survey/Mapping Scientists		Atmosp/Space Scientists	
	No.	%	No.	%	No.	%	No.	%	No.	%
TOTAL	**88,450**	**100.00**	**2,274**	**100.00**	**46,127**	**100.00**	**31,634**	**100.00**	**8,415**	**100.00**
MALES	**80,188**	**90.66**	**1,904**	**83.73**	**40,985**	**88.05**	**30,313**	**95.82**	**6,986**	**83.02**
White*	75,268	85.10	1,827	80.34	38,969	84.48	28,089	88.79	6,383	75.85
Black*	1,492	1.69	10	0.44	488	1.06	713	2.25	281	3.34
Indian/Alaskan Native*	414	0.47	5	0.22	85	0.18	279	0.88	45	0.53
Asian/Pacific Isl. *	987	1.12	38	1.67	621	1.35	222	0.70	106	1.26
Other Race*	100	0.11	12	0.53	46	0.10	16	0.05	26	0.31
Hispanic	1,927	2.23	12	0.53	776	1.68	994	3.14	145	1.72
FEMALES	**8,262**	**9.34**	**370**	**16.27**	**5,142**	**11.15**	**1,321**	**4.18**	**1,429**	**16.98**
White*	7,502	8.48	342	15.04	4,768	10.34	1,173	3.71	1,219	14.49
Black*	378	0.43	0	0.00	205	0.44	44	0.14	129	1.53
Indian/Alaskan Native*	25	0.03	0	0.00	10	0.02	13	0.04	2	0.02
Asian/Pacific Isl. *	136	0.15	9	0.40	91	0.20	10	0.03	26	0.31
Other Race*	13	0.01	0	0.00	5	0.01	8	0.03	0	0.00
Hispanic	208	0.24	19	0.84	63	0.14	73	0.23	53	0.63

* Non-Hispanic

FIELD: Mathematics

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade, National Research Council, March 1973.
Doctorate Recipients from United States Universities Summary Report, 1972, 1973, 1974, 1975, 1976, 1977, 1978, 1979, 1980 and 1981, National Research Council

TABLE 6-43

DOCTORATES AWARDED FROM 1920 TO 1981 BY SUBFIELD OF DOCTORATE AND SEX

	CY1920-FY1972			FY1973-FY1977			FY1978			FY1979-80			FY1981		
	Total	Women	% Women	Total	Women	% Women	Total	Women	% Women	Total	Women	% Women	Total	Women	% Women
Mathematics Subtotal	14,353	1,001	7.0	5,529	1,475	26.7	838	120	14.3	1,513	213	14.1	728	112	15.4
Algebra	1,603	154	9.6	594	111	18.7	87	15	17.2	165	39	23.6	54	14	25.9
Analysis & Functional Anal.[1]	2,641	144	5.5	930	88	9.5	118	13	11.0	202	22	10.9	105	8	7.6
Geometry	396	41	10.4	145	16	11.0	22	1	4.5	60	7	11.7	29	1	3.4
Logic	306	25	8.2	143	16	11.0	24	3	12.5	45	3	6.7	18	1	5.6
Number Theory	296	39	13.2	139	16	11.5	18	1	5.6	45	4	8.9	24	1	4.2
Probability, Math. Stat.[2]	1,410	82	5.8	804	88	10.9	168	31	18.4	317	57	18.0	163	32	19.6
Topology	1,128	55	4.9	459	46	10.0	56	4	7.1	117	16	13.7	55	11	20.0
Topological Algebraic Struc.[3]	176	4	2.3												
Operations Research[4]				78	6	7.7	43	5	11.6	84	9	10.7	35	4	11.4
Computing Theory & Prac.[5]	676	22	3.3	330	69	8.3	55	9	16.4	38	4	10.5	16	2	12.5
Applied Math	1,424	52	3.7	575	29	5.0	108	12	11.1	213	21	9.9	118	24	20.3
Mathematics, General[6]	1,508	174	11.5	502	55	11.0	92	15	16.3	164	24	14.6	80	8	10.0
Mathematics, Other	2,789	209	7.5	251	41	16.3	47	11	23.4	63	7	11.1	31	6	19.4

[1]Specified as "Analysis" through FY1967, "Functional Analysis" was added in FY 1968.
[2]"Math Statistics" was removed from the specification in 1968, but it was added again in 1971.
[3]This specification was dropped in 1966.
[4]Added in 1976.
[5]Added in 1960.
[6]Subfields were not specified until FY 1958. Except for a few cases in earlier years, all doctorates were included in the "general" classification of their respective fields.

FIELD: Mathematics

SOURCE: "Report on the 1982 Survey of New Doctorates," 26th Annual AMS Survey, 1982, American Mathematical Society, NOTICES, Volume 29, No. 7, Issue 221, November 1982

TABLE 6-44

SEX, RACE, AND CITIZENSHIP OF NEW DOCTORATES IN MATHEMATICS
JULY 1, 1980 - JUNE 30, 1981

U.S. DEGREES	MEN					WOMEN					TOTAL
	CITIZENSHIP					CITIZENSHIP					
RACIAL/ETHNIC GROUP	U.S.	Canada	Other	Not Known	Total Men	U.S.	Canada	Other	Not Known	Total Women	
Asian, Pacific Islander	19	3	94	7	123	5		6	1	12	135
Black	5		7		12	2				2	14
American Indian, Eskimo, Aleut											
Mexican American, Chicano, Puerto Rican	2		6		8						8
None of these above	371	10	131	2	514	77		10		87	601
Unknown	34	2	6	1	45	4		2		6	51
Total Number	431	15	246	10	702	88		18	1	107	809

CANADIAN DEGREES	MEN					WOMEN					TOTAL
	CITIZENSHIP					CITIZENSHIP					
RACIAL/ETHNIC GROUP	U.S.	Canada	Other	Not Known	Total Men	U.S.	Canada	Other	Not Known	Total Women	
Asian, Pacific Islander		1	15		16						16
Black											
American Indian, Eskimo, Aleut											
Mexican American, Chicano, Puerto Rican											
None of these above	1	11	12		24		3			3	27
Unknown		5		2	7		1			1	8
Total Number	1	17	27	2	47		4			4	51

SOURCE: Foreign Participation in U.S. Science and Engineering Education and Labor Markets, Special Report, NSF 81-316, National Science Foundation, September 1981 and Summary Report, Doctorate Recipients from U.S. Universities, 1980 and 1981, National Research Council, 1981 and 1982

TABLE 6-45

NUMBER OF PH.D. RECIPIENTS IN THE MATHEMATICAL SCIENCES BY TYPE OF CITIZENSHIP, 1960 - 1981

Year	Total	U.S.	Foreign			
			Total	Immigrants	Non-immigrants	Citizenship not known
1960	291	233	55	11	44	3
1961	332	272	51	7	44	9
1962	388	312	72	7	65	4
1963	483	401	72	11	51	10
1964	588	489	89	9	80	10
1965	685	578	92	16	76	15
1966	769	634	119	22	97	16
1967	830	692	119	27	92	19
1968	970	798	154	42	112	18
1969	1,065	887	163	49	114	15
1970	1,224	1,018	191	57	134	15
1971	1,238	1,012	214	62	152	12
1972	1,281	1,030	234	65	169	17
1973	1,232	251	254	81	173	27
1974	1,208	873	295	71	224	40
1975	1,147	848	272	75	197	27
1976	1,003	748	238	55	183	17
1977	959	710	224	54	170	25
1978	959	704	233	52	181	22
1979	977	712	244	63	181	21
1980	963	676	258	76	182	29
1981	960	648	289	63	226	23

FIELD: Computer Sciences

SOURCE: Earned Degrees Conferred Series, 1947-48 through 1980-81 U.S. Office of Education (NCES)

TABLE 6-46

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1947-48 - 1980-81

	BACHELOR'S			MASTER'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1964-65 thru 1969-70	3,334	416	12.5	3,852	287	7.5
1970-71	1,624	236	14.5	1,588	164	10.3
1971-72	3,402	461	13.5	1,977	225	11.4
1972-73	4,305	640	14.9	2,113	225	10.6
1973-74	4,757	780	16.4	2,276	293	12.8
1974-75	5,039	956	18.9	2,299	338	14.7
1975-76	5,664	1,124	19.8	2,603	377	14.5
1976-77	6,407	1,531	23.9	2,798	466	16.7
1977-78	7,224	1,864	25.8	3,038	567	18.7
1978-79	8,769	2,463	28.1	3,055	575	18.8
1979-80	11,213	3,399	30.3	3,647	764	20.9
1980-81	15,121	4,919	32.5	4,218	971	23.0
TOTAL	76,859	18,789	24.4	33,464	5,252	15.7

TABLE 6-47

DOCTORAL DEGREES BY SEX, 1964-65 - 1980-81

ACADEMIC YEAR	Total Both Sexes	Women Only	% Women
1964-65 thru 1969-70	269	6	2.2
1970-71	128	3	2.3
1971-72	167	12	7.2
1972-73	196	15	7.7
1973-74	198	9	4.5
1974-75	213	14	6.6
1975-76	244	23	9.4
1976-77	216	19	8.8
1977-78	196	15	7.7
1978-79	209	27	12.9
1979-80	240	27	11.3
FY 1981	232	26	11.2
TOTAL	2,508	196	7.8

FIELD: Mathematics

SOURCE: Earned Degrees Conferred Series, 1947-48 through 1980-81, U.S. Office of Education (NCES)

TABLE 6-48

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1947-48 - 1980-81

	BACHELOR'S*			MASTER'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1947-48 thru 1959-60	75,934	22,122	29.1	12,483	2,470	19.8
1960-61 thru 1969-70	199,582	68,253	34.2	39,445	9,390	23.8
1970-71	24,701	9,439	38.2	4,706	1,425	30.3
1971-72	23,680	9,276	39.2	4,793	1,467	30.6
1972-73	23,003	9,264	40.3	4,603	1,409	30.6
1973-74	21,556	8,845	41.0	4,387	1,392	31.7
1974-75	18,133	7,632	42.1	3,893	1,319	33.9
1975-76	15,787	6,462	40.9	3,392	1,202	35.4
1976-77	13,906	5,767	41.5	3,222	1,169	36.3
1977-78	12,428	5,139	41.4	2,876	1,016	35.3
1978-79	11,901	4,958	41.7	3,046	1,057	34.7
1979-80	11,473	4,848	42.3	2,868	1,036	36.1
1980-81	11,078	4,736	42.8	2,567	875	34.1
TOTAL	463,262	166,741	40.0	92,281	25,227	27.3

*Includes Statistics until 1955-56

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade and Doctorate Recipients from United States Universities, Summary Reports 1971-1981, National Research Council

TABLE 6-49

DOCTORAL DEGREES BY SEX, 1920-1981

	Total Both Sexes	Women Only	% Women
CY 1920 thru FY 1959*	4,213	368	8.7
FY 1960 thru FY 1969	6,401	364	5.7
FY 1970-72	3,739	269	7.2
FY 1973	1,222	119	9.7
FY 1974	1,196	115	9.6
FY 1975	1,149	110	9.6
FY 1976	1,003	113	11.3
FY 1977	959	128	13.3
FY 1978	838	120	14.3
FY 1979	768	118	15.4
FY 1980	745	95	12.8
FY 1981	728	112	15.4
T	22,961	2,031	8.8

*Data are aggregated on a calendar year (CY) basis from 1920 to 1957 and on a fiscal year (FY) basis from 1958 (July 1, 1957 to June 30, 1958) to the present.

FIELD: Statistics

SOURCE: Earned Degrees Conferred Series, 1947-48 thru 1980-81 U.S. Office of Education (NCES)

TABLE 6-50

DEGREES AWARDED, BY SEX AND LEVEL OF DEGREE, 1947-48 - 1980-81

	BACHELOR'S			MASTER'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1947-48 thru + 1959-60	344	78	22.7	506	56	11.1
1960-61 thru 1969-70	2,355	377	16.0	3,507	513	14.6
1970-71	217	55	25.3	495	99	20.0
1971-72	168	47	27.9	416	85	20.4
1972-73	198	69	34.8	402	91	22.6
1973-74	257	94	36.6	453	108	23.8
1974-75	213	68	31.9	449	109	24.1
1975-76	258	92	35.7	471	111	23.6
1976-77	290	126	43.4	473	130	27.5
1977-78	273	107	39.2	507	134	26.4
1978-79	214	82	38.3	532	152	28.6
1979-80	247	104	42.1	495	133	26.9
1980-81	226	95	42.0	467	144	30.8
TOTAL	5,260	1,377	26.2	9,173	1,865	20.3

+Data begins for 1955-56 when identified as a separate field

+ Data begins for 1955-56 when identified as a separate field

TABLE 6-51

DOCTORAL DEGREES BY SEX, 1955-56 - 1980-81

	Total Both Sexes	Women Only	% Women
1955-56 thru 1959-60	170	6	3.5
1960-61 thru 1969-70	965	71	7.4
1970-71	185	12	6.5
1971-72	173	12	6.9
1972-73	156	17	10.9
1973-74	147	10	6.8
1974-75	158	16	10.1
1975-76	141	16	11.3
1976-77	142	23	16.2
1977-78	153	32	20.9
1978-79	142	30	21.1
1979-80	115	24	20.9
1980-81	144	22	15.3
TOTAL	2,791	291	10.4

FIELD: Mathematics

SOURCE: The American Mathematical Society NOTICES, Vol. 25, No. 6, Issue No. 188, October 1978; Vol. 28, No. 2, November 1981; Vol. 29, No. 7 Issue 221, November 1982

TABLE 6-52

NUMBER AND PERCENT OF DOCTORAL FACULTY IN DOCTORATE GRANTING DEPARTMENTS BY SEX, RANK, TYPE OF INSTITUTION AND TENURE, 1978-79, 1981-82 AND 1982-83*

TYPE OF INSTITUTION	DOCTORAL DEGREE RANK	1978 - 1979						1981 - 1982						1982 - 1983					
		No. of Faculty			Tenured Faculty			No. of Faculty			Tenured Faculty			No. of Faculty			Tenured Faculty		
		Total	W	% W	Total	W	% W	Total	W	% W	Total	W	% W	Total	Women	% W	Total	W	% W
Doctorate Granting Departments Group I	Instructor	71	5	7.0	2	0	0.0	43	5	11.6	2	0	0.0	30	6	20.0	0	0	0.0
	Ass't. Prof.	149	14	9.4	3	1	33.3	135	10	7.4	3	2	66.7	150	22	14.7	4	2	50.0
	Assoc. Prof.	142	7	4.9	131	7	5.3	116	9	7.8	109	8	7.3	124	7	5.6	121	7	5.8
	Professor	535	10	1.9	534	10	1.9	488	10	2.0	487	10	2.1	609	15	2.5	609	15	2.5
Doctorate Granting Departments Group II	Instructor	74	9	12.2	2	0	0.0	41		9.8	2	0	0.0	55	9	16.4	2	0	0.0
	Ass't. Prof.	244	20	8.2	9	2	22.2	156	15	9.6	4	3	75.0	181	19	10.5	11	5	45.5
	Assoc. Prof.	333	14	4.2	321	13	4.0	297	16	5.4	273	14	5.1	337	18	5.3	316	17	5.4
	Professor	446	13	2.9	444	13	2.9	496	12	2.4	495	12	2.4	566	14	2.5	554	14	2.5
Doctorate Granting Departments Group III	Instructor	39	4	10.3	1	1	100.0	40	7	17.5	1	1	100.0	37	2	5.4	0	0	0.0
	Ass't. Prof.	415	46	11.1	60	4	6.7	358	39	10.9	39	3	7.7	390	39	10.0	41	2	4.9
	Assoc. Prof.	664	26	3.9	633	23	3.6	522	38	7.3	495	34	6.9	605	35	5.8	570	30	5.3
	Professor	719	21	2.9	712	21	2.9	759	23	3.0	755	23	3.0	854	25	2.9	846	25	3.0
Doctorate Granting Departments Group IV	Instructor	19	2	10.5	1	0	0.0	6	3	50.0	1	1	100.0	2	2	100.0	1	1	100.0
	Ass't. Prof.	6	1	16.7	2	1	50.0	161	24	14.9	9	1	11.1	149	22	14.8	4	1	25.0
	Assoc. Prof.	4	1	25.0	3	1	33.3	118	11	9.3	99	9	9.1	92	6	6.5	70	2	2.9
	Professor	4	0	0.0	4	0	0.0	295	11	3.7	294	10	3.4	271	9	3.3	266	9	3.4
Doctorate Granting Departments Group V	Instructor	18	2	11.1	1	1	100.0	27	4	14.8	0	0	0.0	14	6	42.9	0	0	0.0
	Ass't. Prof.	2	0	0.0	1	0	0.0	246	23	9.3	3	0	0.0	257	21	8.2	3	0	-
	Assoc. Prof.	2	1	50.0	1	0	0.0	190	8	4.2	148	7	4.7	195	8	4.1	152	5	3.3
	Professor	6	0	0.0	5	0	0.0	350	7	2.0	274	5	1.8	352	8	2.3	343	7	2.0
Doctorate Granting Departments Group VI	Instructor	11	2	18.2	0	0	0.0	1	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0
	Ass't. Prof.	23	9	39.1	18	9	50.0	61	5	8.2	10	1	10.0	40	4	10.0	7	1	14.3
	Assoc. Prof.	24	2	8.3	22	2	9.1	152	3	2.0	146	2	1.4	116	3	2.6	113	3	2.7
	Professor	10	0	0.0	10	0	0.0	158	2	1.3	158	2	1.3	150	1	0.7	150	1	0.7
All Doctorate Granting Departments	Instructor	232	24	10.3	7	2	28.6	158	23	14.5	6	2	33.3	138	25	18.1	3	1	33.3
	Ass't. Prof.	839	90	10.7	98	17	17.3	1,117	116	10.3	68	10	14.7	1,167	127	10.9	70	11	15.7
	Assoc. Prof.	1,169	51	4.4	1,111	45	4.1	1,395	85	6.1	1,270	74	5.8	1,469	77	5.2	1,342	64	4.8
	Professor	1,720	44	2.6	1,709	44	2.6	2,546	65	2.5	2,463	62	2.5	2,802	72	2.6	2,768	71	2 6
All Doctorate Departments All Ranks		3,960	209	5.3	2,925	108	3.7	5,216	289	5.5	3,807	148	3.9	5,576	301	5.4	4,183	147	3.5

* Numbers reported are totals for institutions responding to the survey and do not represent total faculty.

FIELD: Mathematics

SOURCE: The American Mathematical Society NOTICES, Vol. 25. No. 6, Issue No. 188, October 1978; Vol. 28, No. 2, November 1981; and Vol. 29, No. 7, Issue 221, November 1981

TABLE 6-53

NUMBER AND PERCENT OF FACULTY IN NON-DOCTORATE GRANTING DEPARTMENTS BY SEX, RANK, TYPE OF INSTITUTION AND TENURE, 1978-79, 1981-82*, and 1982-83

TYPE OF INSTITUTION	DOCTORAL DEGREE RANK	1978 - 1979						1981 - 1982						1982 - 1983					
		No. of Faculty			Tenured Faculty			No. of Faculty			Tenured Faculty			No. of Faculty			Tenured Faculty		
		Total	W	% W	Total	W	% W	Total	W	% W	Total	W	% W	Total	Women	% W	Total	W	% W
MASTER'S DEGREE																			
Without Doctorate	Instructor	227	110	48.6	42	16	38.1	232	116	50.0	33	15	45.5	289	149	51.6	29	13	44.8
	Ass't. Prof.	300	68	22.7	277	59	21.3	191	46	24.1	157	33	21.0	253	54	21.3	193	39	28.1
	Assoc. Prof.	221	27	12.2	219	27	12.3	171	21	12.3	170	20	11.8	170	19	11.2	163	19	11.7
	Professor	60	4	6.7	60	4	6.7	39	2	5.1	39	2	5.1	45	5	11.1	45	5	11.1
With Doctorate	Instructor	34	9	26.5	0	0	0.0	28	8	28.6	2	1	50.0	36	6	16.7	1	0	0.0
	Ass't. Prof.	553	69	12.5	139	14	10.1	458	72	15.7	85	7	8.2	548	82	15.0	85	10	11.8
	Assoc. Prof.	889	59	6.6	816	53	6.5	736	60	8.2	675	51	7.6	783	71	9.1	687	54	7.9
	Professor	706	41	5.8	699	40	5.7	762	52	6.8	752	47	6.3	848	54	6.4	831	52	6.3
BACHELOR'S DEGREE																			
Without Doctorate	Instructor	182	73	40.1	16	8	50.0	252	118	46.8	21	9	42.9	298	143	48.0	8	2	25.0
	Ass't. Prof.	251	65	25.9	154	32	20.8	255	64	25.1	149	35	23.5	286	62	21.7	130	28	21.5
	Assoc. Prof.	230	30	13.0	216	28	13.0	222	29	13.1	207	25	12.1	236	28	11.9	210	24	11.4
	Professor	70	8	11.4	67	8	11.9	71	7	9.9	67	7	10.4	85	7	8.2	83	7	8.4
With Doctorate	Instructor	19	6	31.6	1	0	0.0	14	5	35.7	1	0	0.0	19	5	26.3	1	1	100.0
	Ass't. Prof.	438	55	12.6	76	6	7.9	475	90	18.9	61	6	9.8	444	88	19.8	50	8	16.0
	Assoc. Prof.	505	55	10.9	428	45	10.5	556	63	11.3	452	52	11.5	562	59	10.5	450	41	9.1
	Professor	432	36	8.3	411	36	8.8	487	37	7.6	458	32	7.0	546	34	6.2	522	31	5.9
ALL INSTITUTIONS**																			
Without Doctorate		1,861	475	25.5	1,247	233	18.7	1,789	535	29.9	999	181	18.1	2,050	624	30.4	1,018	167	16.4
With Doctorate		8,993	599	6.7	6,534	323	4.9	8,732	676	7.7	6,293	344	5.5	9,362	700	7.5	6,810	344	5.1
TOTAL		10,854	1,074	9.9	7,781	556	7.1	10,521	1,211	11.5	7,292	525	7.2	11,412	1,324	11.6	7,828	511	6.5

* Number of institutions reporting varies from year to year in all types of institutions. Numbers reported do not represent total faculty.

** Includes information on doctorate granting institutions shown in preceding Table.

FIELD: Mathematics

SOURCE: 1980 Census of Occupations, Special EEO File, Bureau of the Census

TABLE 6-54

MATHEMATICIANS IN ACADEMIC AND NON-ACADEMIC EMPLOYMENT BY SEX AND RACE/ETHNICITY, 1980

	Total		Math & Science Teachers		ALL OTHER					
					Math Scientists		Statisticians		Actuaries	
	No.	%	No.	%	No.	%	No.	%	No.	%
TOTAL	63,617	100.00	16,697	100.00	6,401	100.00	30,200	100.00	10,319	100.00
MALES	39,944	62.79	11,390	68.22	5,188	81.05	15,684	51.93	7,682	74.45
White*	35,571	55.91	10,004	59.91	4,576	71.49	13,711	45.40	7,280	70.55
Black*	1,621	2.55	496	2.97	248	3.87	786	2.60	91	0.88
Indian/Alaskan Native*	124	0.19	58	0.35	25	0.39	41	0.14	0	0.00
Asian/Pacific Isl.*	1,699	2.67	507	3.04	200	3.12	733	2.43	259	2.51
Other Race*	42	0.07	14	0.08	7	0.11	15	0.05	6	0.06
Hispanic	847	1.33	311	1.86	132	2.06	398	1.32	46	0.45
FEMALES	23,673	37.21	5,307	31.78	1,213	18.95	14,516	48.07	2,637	25.55
White*	19,868	31.23	4,555	27.28	959	14.98	11,917	39.46	2,437	23.62
Black*	2,306	3.62	438	2.62	179	2.80	1,595	5.28	94	0.91
Indian/Alaskan Native*	64	0.10	7	0.04	0	0.00	57	0.19	0	0.00
Asian/Pacific Isl.*	856	1.35	221	1.32	60	0.94	497	1.65	78	0.76
Other Race*	16	0.03	5	0.03	0	0.00	11	0.04	0	0.00
Hispanic	563	0.88	81	0.49	15	0.23	439	1.45	28	0.27

* Non-Hispanic

SOURCE: Supply and Demand for Scientists and Engineers, Scientific Manpower Commission, 1982; Data Source: National Center for Education Statistics

TABLE 6-55

DEGREES IN MATHEMATICS/STATISTICS AND COMPUTER SCIENCES 1970-1981 PROJECTED TO 1989

	Bachelor's Degrees				Master's Degrees				Doctoral Degrees			
	Math & Statistics		Computer Science		Math & Statistics		Computer Science		Math & Statistics		Computer Science	
Year	Total	% W	Total	% W	Total	% W	Total	% W	Total	% W	Total	% W
1970	27,442	37.4	1,544	12.9	5,636	29.6	1,459	9.3	1,236	7.8	107	1.9
1971	24,801	38.0	1,624	14.5	5,191	29.2	1,588	10.3	1,199	7.8	128	2.3
1972	23,713	39.0	3,402	13.5	5,198	29.7	1,977	11.4	1,128	7.9	167	7.2
1973	23,067	40.2	4,305	14.9	5,028	29.9	2,113	10.6	1,068	9.6	196	7.7
1974	21,635	40.9	4,757	16.4	4,834	31.0	2,276	12.9	1,031	9.7	198	4.5
1975	18,181	41.8	5,039	18.9	4,327	32.9	2,299	14.7	975	11.3	213	6.6
1976	15,984	40.7	5,664	19.8	3,857	34.0	2,603	14.5	856	11.0	244	9.4
1977	14,196	41.5	6,407	23.9	3,695	35.2	2,798	16.7	823	13.2	216	8.8
1978	12,569	41.4	7,224	25.8	3,373	33.9	3,038	18.7	805	15.4	196	7.7
1979	12,115	41.6	8,769	28.1	3,578	33.8	3,055	18.8	933	16.0	209	12.9
1980	11,473	42.3	11,213	30.3	2,868	36.1	3,647	20.9	724	13.8	240	11.3
1981	11,078	42.8	15,121	32.5	2,567	34.1	4,218	23.0	728	15.7	252	9.9
Projected												
1981	8,120	38.4	8,730	25.4	2,540	37.0	3,580	22.9	700	17.1	190	10.5
1982	7,940	38.8	9,130	26.4	2,550	36.5	3,840	23.4	650	18.5	180	11.1
1983	7,960	39.2	9,660	25.4	2,550	36.1	4,050	23.7	630	17.5	180	11.1
1984	7,940	39.8	9,810	25.1	2,550	35.7	4,180	22.7	620	17.7	180	11.1
1985	7,900	40.4	9,830	26.9	2,560	35.2	4,340	21.7	610	18.0	170	11.8
1986	8,020	42.3	9,800	28.0	2,540	35.4	4,320	21.8	600	18.3	170	11.8
1987	8,000	43.3	9,780	28.7	2,530	35.6	4,280	21.7	580	17.2	170	11.8
1988	8,100	44.7	9,940	29.3	2,460	34.6	4,200	21.2	570	17.5	160	12.5
1989	8,180	45.7	10,110	29.0	2,420	34.3	4,140	21.0	550	16.4	160	12.5

Source: National Center for Education Statistics

FIELD: Mathematics, Statistics and Computer Specialties

SOURCE: Federal Civilian Workforce Statistics, Equal Employment Opportunity Statistics, U.S. Office of Personnel Management, AR-80-71, Nov. 1980

TABLE 6-56

NUMBER AND PERCENT OF FEDERAL WORKERS EMPLOYED IN MATHEMATICS, STATISTICS AND COMPUTER SPECIALTIES BY OCCUPATIONAL TITLE, SEX AND MINORITY STATUS, NOVEMBER 1980

OCCUPATIONAL TITLE	ALL EMPLOYEES			TOTAL MINORITY				BLACK		HISPANIC		AM. INDIAN		ASIAN		ALL OTHERS	
	Total	Women	% W	Total	%	Women	% W	No.	% B	No.	% H	No.	% I	No.	% A	No.	% O
Actuary	127	20	15.7	14	11.0	3	2.4	7	5.5	4	3.1	0	0.0	3	2.4	113	89.0
Operations Research	3,351	334	10.0	263	7.8	37	1.1	128	3.8	61	1.8	7	0.2	67	2.0	3,088	92.2
Mathematics	3,641	786	21.6	440	12.1	133	3.7	275	7.6	86	2.4	4	0.1	75	2.1	3,201	87.9
Mathematics Technician	204	120	58.8	20	9.8	10	4.9	10	4.9	5	2.5	0	0.0	5	2.5	184	90.2
Mathematics Statistician	1,070	227	21.2	142	13.3	49	4.6	67	6.3	13	1.2	3	0.3	59	5.5	928	86.7
Statistician	2,870	838	29.2	461	16.1	243	8.5	330	11.5	67	2.3	1	*	63	2.2	2,409	83.9
Statistical Assistant	968	824	85.1	445	46.0	391	40.4	420	43.4	13	1.3	3	0.3	9	0.9	523	54.0
Digital Computer Sys. Admin.	1,628	209	12.8	165	10.1	45	2.8	127	7.8	25	1.5	5	0.3	8	0.5	1,463	89.9
Computer Specialist	28,572	6,718	23.5	3,808	13.3	1,345	4.7	2,848	10.0	489	1.7	104	0.4	367	1.3	24,764	86.7
Computer Operation	10,546	4,406	41.8	3,530	33.5	1,751	16.6	2,844	27.0	453	4.3	87	0.8	146	1.4	7,016	66.5

* Less than 0.05%.

CHAPTER 7

ENGINEERING, TECHNOLOGY AND TECHNICIANS

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FIELD: Engineering

SOURCE: Estimates derived from tables throughout Professional Women and Minorities - Summary Table

TABLE 7-1

PROPORTION OF WOMEN AND MINORITIES IN ENGINEERING POPULATIONS

	Women		Blacks		Hispanic		American Indian		Asian		Foreign Nationals		Other	
Enrollments (Fall of)	**1969**	**1981**	**1969**	**1981**	**1973**	**1981**	**1973**	**1981**	**1973**	**1981**	**1973**	**1981**	**1973**	**1981**
First Year	1.6	15.8	1.3	6.1	2.9	4.1	0.1	0.4	1.7	3.5	NA	4.3	86.5	65.5
Undergraduate Total Full Time	1.3	14.5	1.2	4.5	3.2	3.5	0.2	0.3	2.0	3.7	NA	6.5	88.4	67.0
Graduate Total Full Time	2.1	9.7	0.2	1.2	0.8	1.2	0.1	0.1	2.5	4.6	27.6	37.6	65.4	45.6
DEGREES	**1960-77**	**1982**	**1969-77**	**1982**	**1973-77**	**1982**	**1973-77**	**1982**	**1973-77**	**1982**	**1973-77**	**1982**	**1973-77**	**1982**
Bachelor's	1.2	12.2	1.5	2.5	2.5	2.4	0.1	0.1	2.4	3.8	6.6	8.1	86.7	83.1
Master's	1.4	8.4	0.6	1.0	1.1	1.2	0.05	0.1	3.2	4.6	20.4	28.5	74.6	64.6
Doctorate	1.0	4.4	0.3	0.4	0.6	0.9	0.03	0.1	4.0	4.3	30.9	40.4	64.2	53.9
General Workforce	**1960**	**1980**	**1970**	**1978**	**1970**	**1980**	**1970**	**1980**	**1970**	**1980**			**1970**	**1980**
	0.8	4.0	1.0	2.3	1.4	2.2	0.03	0.21	1.5	4.34			96.1	86.7
Academic Workforce	**1972**	**1982**		**1980**		**1980**		**1980**		**1980**				
	0.4	1.0		3.4		2.0		0.4		4.8				
Federal Workforce	**1974**	**1979**	**1974**	**1979**	**1974**	**1979**	**1974**	**1979**	**1974**	**1979**			**1974**	**1979**
	0.6	1.4	1.7	2.3	1.0	1.8	0.2	0.3	1.3	2.6			95.8	91.6
Doctoral Population	**1973**	**1981**	**1973**	**1981**	**1973**	**1981**	**1973**	**1981**	**1973**	**1981**		**1981**	**1973**	**1981**
	0.4	1.3	0.3	0.5	0.4	1.3	0.1	0.6	9.2	17.6		10.4	89.6	68.3

See also sections on Enrollments, Degrees, General Workforce and Academic Workforce.

FIELD: Engineering

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade, National Research Council, March 1973.
Doctorate Recipients from United States Universities Summary Reports 1972-1981, National Research Council

TABLE 7-2

DOCTORATES AWARDED FROM 1920 TO 1981 BY SUBFIELD OF DOCTORATE AND SEX, 1981

	CY1920-FY1972			FY1973-FY1977			FY1978			FY1979-80			FY1981		
	Total	Women	% Women	Total	Women	% Women	Total	Women	% Women	Total	Women	% Women	Total	Women	% Women
Engineering Subtotal	37,709	164	0.4	14,921	256	1.7	2,423	53	2.2	4,973	153	3.1	2,528	99	3.9
Aeronautical & Astron. Eng.[1]	1,827	13	0.7	696	10	1.4	103	1	0.9	162	1	0.6	97	0	
Agricultural Engineering	588	0	0.0	257	2	0.8	43	0	0.0	134	1	0.7	62	2	3.2
Biomedical Engineering[2]	230	0	0.0	356	9	2.5	79	0	0.0	137	4	2.9	63	3	4.8
Civil Engineering	3,433	11	0.3	1,561	24	1.5	236	6	2.5	475	8	1.7	287	6	2.1
Chemical Engineering	6,002	27	0.4	1,802	32	1.8	261	5	1.9	572	22	3.8	296	11	3.7
Ceramic Engineering	552	5	0.9	126	6	4.8	24	0	0.0	48	3	6.3	24	1	4.2
Electrical Engineering	7,389	22	0.3	2,783	34	1.2	410	11	2.7	856	18	2.1	411	14	3.4
Electronics Engineering	1,419	7	0.5	436	4	0.9	53	1	1.9	156	12	7.7	67	0	
Industrial Engineering	914	7	0.8	434	12	2.8	51	2	3.9	160	13	8.1	66	6	9.1
Nuclear Engineering[3]	473	2	0.4	569	9	1.6	106	4	3.8	207	4	1.9	130	6	4.6
Engineering Mechanics	952	1	0.1	714	12	1.7	95	1	1.1	176	4	2.3	78	1	1.3
Engineering Physics[3]	1,689	10	0.6	118	2	1.7	15	0	0.0	35	1	2.9	22	2	9.1
Mechanical Engineering	4,279	6	0.1	1,638	14	0.9	281	2	0.7	575	8	1.4	282	5	1.8
Met. & Phys. Met. Eng.[4]	2,991	15	0.5	602	7	1.2	98	2	2.0	194	7	3.6	99	5	5.1
Sanitary & Environ. Eng.[5]	596	2	0.3	216	3	1.4	67	2	3.0	132	7	5.3	71	4	5.6
Textile Engineering[6]	10	8	80.0	0	0	0.0	0	0	0.0	0	0				
Mining Engineering	51	0	0.0	29	0	0.0	7	0	0.0	8	0		8	0	
Material Science Eng.[7]	197	0	0.0	630	21	3.3	125	3	2.4	267	12	4.5	113	11	9.7
Operations Research[8]	0	0	0.0	477	11	2.3	84	2	2.4	99	10	10.1	80	7	8.8
Fuel Tech., Petroleum Eng.[8]	0	0	0.0	126	7	5.6	19	0	0.0	55	1	1.8	21	0	
Computering Engineering[9]	0	0	0.0	342	24	7.0	76	5	6.6	141	8	5.7	71	8	11.3
Systems Design[9]/Systems Sci.[11]	0	0	0.0	165	2	1.2	62	1	1.6	137	8	5.8	68	4	5.9
Engineering, General[10]	283	1	0.3	194	3	1.5	45	1	2.2	74	7	9.5	37	1	2.7
Engineering, Other	3,138	27	0.7	852	18	2.1	81	4	4.9	142	4	2.8	75	2	2.7

Originally specified as "Aeronautical." In 1966, "Astronautical" was added.
[2] Added in 1968
[3] In 1960, "Nuclear Engineering" was dropped and previous cases were added to "Engineering Physics." It was added again as a separate field in 1968.
[4] Originally specified as "Metallurgy & Met. Eng." Added "Phys." in 1966.
[5] "Environmental" added in 1977.
[6] Dropped in 1960. Previous cases were added to "Engineering Other."
[7] Added in 1971. Added in 1973. [9] Added in 1975.
[10] Subfields were not specified until FY 1958. Except for a few cases in earlier years, all doctorates were included in the "General" classification classification of their respective fields.
[11] Added in 1979.

FIELD: Engineering

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade and Doctorate Recipients from United States Universities, Summary Reports 1971-1981, National Research Council

TABLE 7-3

DOCTORATES AWARDED FROM 1920 to 1981 BY SUBFIELD OF ENGINEERING AND SEX

FIELD	Cy 1920-FY 1959*	FY 1960-FY 1969	FY 1970-72	FY 1973	FY 1974	FY 1975	FY 1976	FY 1977	FY 1978	FY 1979	FY 1980	FY 1981	TOTAL
Aeronautical													
Total	298	948	581	167	151	141	122	115	103	81	81	97	2885
Women	2	6	5	2	3	2	0	3	1	0	1	0	25
%Women	.67	.63	.86	1.19	1.98	1.42		2.61	.97		1.23		.87
Chemical													
Total	1,811	2,971	1,220	408	404	370	314	306	261	287	285	296	8933
Women	3	17	7	4	8	4	7	9	5	8	14	11	97
%Women	.17	.57	.57	.98	1.98	1.08	2.23	2.94	1.91	2.79	4.91	3.72	1.09
Civil													
Total	464	1,919	1,050	357	332	290	314	268	236	236	239	287	6269
Women	1	7	3	6	4	3	4	7	6	2	6	6	55
%Women	.22	.36	.28	1.68	1.20	1.03	1.27	2.61	2.54	.85	2.51	2.09	.88
Electrical													
Total	1,311	3,934	2,144	673	601	536	512	461	410	451	405	411	11,849
Women	3	11	8	6	3	9	7	9	11	7	11	14	99
%Women	.23	.28	.37	.89	.50	1.68	1.36	1.95	2.68	1.55	2.72	3.41	.84
Industrial													
Total	70	452	392	109	93	92	67	73	51	83	77	130	1,686
Women	0	4	3	2	1	2	2	5	2	6	7	6	40
%Women		.88	.76	183	1.07	2.17	2.98	6.84	3.92	7.23	9.09	4.62	2.37
Mechanical													
Total	791	2,282	1,206	364	375	325	304	270	281	282	293	282	7054
Women	1	2	3	3	3	2	3	3	2	4	4	5	35
%Women	.13	.09	.25	.82	.80	.62	.98	1.11	.71	1.42	1.37	1.77	.50
Metallurgical													
Total	943	1,441	607	140	141	118	111	92	98	87	107	99	3897
Women	4	7	4	3	1	0	2	1	2	0	7	5	36
%Women	.42	.49	.66	2.14	.71		1.80	1.08	2.04		6.54	5.05	.92
Mining†													
Total	0	10	41	12	3	6	6	2	7	4	4	8	103
Women	0	0	0	0	0	0	0	0	0	0	0	0	0
%Women													

* Data are aggregated on a calendar year (CY) basis from 1920 to 1957 and on a fiscal year (FY) basis from 1958 (July 1, 1957 to June 30, 1958) to the present.

† Not identified as a separate field until 1968.

FIELD: Engineering

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade and Doctorate Recipients from United States Universities, Summary Reports 1971-1981, National Research Council

TABLE 7-4

DOCTORAL DEGREES BY SEX, 1920-1981

	Total Both Sexes	Women Only	% Women
CY 1920 thru FY 1959*	8,265	35	0.4
FY 1960 thru FY 1969	19,042	77	0.4
FY 1970-72	10,402	52	0.5
FY 1973	3,338	45	1.3
FY 1974	3,144	34	1.1
FY 1975	2,959	50	1.7
FY 1976	2,791	53	1.9
FY 1977	2,641	74	2.8
FY 1978	2,423	53	2.2
FY 1979	2,494	63	2.5
FY 1980	2,479	90	3.6
FY 1981	2,528	99	3.9
TOTAL	62,506	725	1.2

*Data are aggregated on a calendar year (CY) basis from 1920 to 1957 and on a fiscal year (FY) basis from 1958 (July 1, 1957 to June 30, 1958) to the present

TABLE 7-5

NUMBER OF PH.D. RECIPIENTS IN ENGINEERING BY TYPE OF CITIZENSHIP, 1960 - 1981

YEAR	TOTAL	U.S.	FOREIGN			CITIZENSHIP NOT KNOWN
			TOTAL	IMMIGRANTS	NON IMMIGRANTS	
1960	794	607	183	54	129	4
1961	940	732	202	48	154	6
1962	1,216	949	259	41	218	8
1963	1,357	1,062	280	65	215	15
1964	1,664	1,313	331	84	247	20
1965	2,074	1,603	430	111	319	41
1966	2,301	1,718	501	116	385	82
1967	2,604	1,957	607	198	409	40
1968	2,848	2,134	680	244	436	34
1969	3,251	2,416	780	320	460	55
1970	3,433	2,542	872	401	471	19
1971	3,500	2,436	1,032	513	519	32
1972	3,476	2,307	1,137	619	518	32
1973	3,339	2,126	1,170	552	618	43
1974	3,121	1,735	1,208	507	701	178
1975	2,961	1,685	1,223	413	310	53
1976	2,791	1,532	1,183	384	799	76
1977	2,641	1,468	1,098	325	773	75
1978	2,423	1,259	1,092	325	767	72
1979	2,494	1,294	1,138	322	816	62
1980	2,479	1,254	1,148	298	850	77
1981	2,528	1,168	1,241	298	943	119

FIELD: Engineering

SOURCE: Earned Degrees Conferred Series, 1947-48 thru 1980-81 U.S. Office of Education (NCES)

TABLE 7-6

DEGREES AWARDED, BY SEX AND LEVEL OF DEGREE, 1947-48 - 1980-81

	BACHELOR'S			MASTER'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1947-48 thru 1959-60	435,534	1,356	.31	63,909	219	.34
1960-61 thru 1969-70	372,020	1,880	.50	123,075	716	.58
1970-71	45,209	361	.80	16,323	185	1.13
1971-72	45,693	492	1.08	16,729	271	1.62
1972-73	46,759	576	1.2	16,510	276	1.67
1973-74	43,237	697	1.6	15,176	347	2.29
1974-75	39,806	845	2.1	15,138	371	2.45
1975-76	38,774	1,317	3.4	16,021	568	3.55
1976-77	40,936	2,022	4.9	15,961	697	4.36
1977-78	47,222	3,479	7.4	16,049	840	5.23
1978-79	53,445	4,880	9.1	15,242	934	6.12
1979-80	58,774	5,948	10.1	15,911	1,122	7.05
1980-81	63,287	7,024	11.1	16,386	1,323	8.07
TOTAL	1,330,696	30,877	2.3	362,430	7,869	2.17

TABLE 7-7

ENGINEERING TECHNOLOGY DEGREES AWARDED, BY SEX AND LEVEL OF DEGREE, 1970-71 - 1980-81

	BACHELOR'S			MASTER'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1970-71	5,148	42	.80	134	-	0
1971-72	5,772	46	.80	237	1	0.42
1972-73	4,854	52	1.07	122	2	1.64
1973-74	7,456	105	1.40	209	9	4.30
1974-75	7,497	192	2.57	221	4	1.80
1975-76	7,943	165	2.07	328	14	4.26
1976-77	8,347	196	2.34	284	23	8.09
1977-78	8,787	246	2.80	360	25	6.94
1978-79	9,355	327	3.49	268	18	6.71
1979-80	10,491	490	4.67	339	20	5.89
1980-81	11,713	675	5.76	323	39	12.07
TOTAL	87,373	2,536	2.90	2,825	155	5.49

FIELD: Engineering

SOURCE: Engineering and Technology Degrees, 1969 through 1982 series, Engineering Manpower Commission.

TABLE 7-8

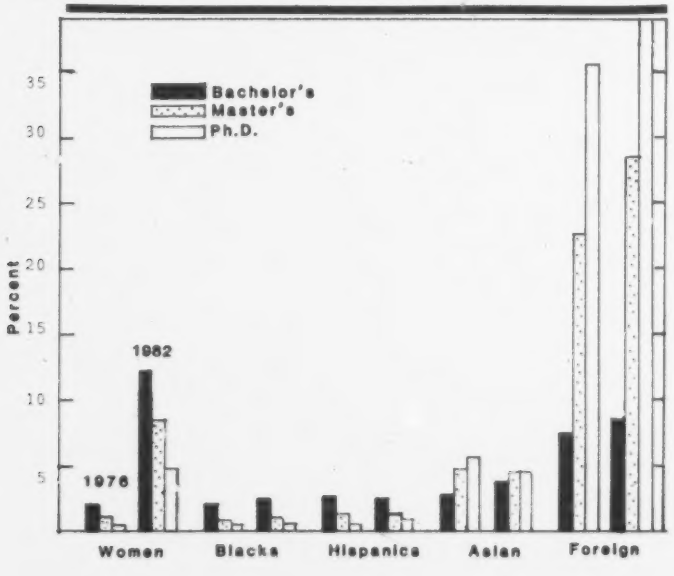
ENGINEERING DEGREES GRANTED TO WOMEN BY DEGREE LEVEL, 1968-69 THROUGH 1980-82

YEAR	BACHELORS			MASTERS+			DOCTOR'S		
	Total	Women	% W	Total	Women	% W	Total	Women	% W
1968-69*	39,972	328	0.82	14,980	107	0.71	3,387	23	0.68
1969-70*	42,966	358	0.83	15,548	170	1.09	3,620	16	0.44
1970-71*	43,167	353	0.82	16,383	158	0.96	3,640	25	0.69
1971-72	44,190	525	1.19	17,356	299	1.76	3,774	35	0.93
1972-73	43,429	624	1.44	17,152	226	1.32	3,587	48	1.34
1973-74	41,407	744	1.80	15,885	393	2.47	3,362	36	1.07
1974-75	38,210	878	2.30	15,773	380	2.41	3,039	53	1.74
1975-76	37,970	1,376	3.62	16,506	557	3.37	2,977	56	1.88
1976-77	40,095	1,961	4.89	16,551	646	3.90	2,814	67	2.38
1977-78	46,095	3,280	7.11	16,182	814	5.03	2,573	51	1.98
1978-79	52,598	4,716	8.97	15,624	866	5.54	2,815	61	2.17
1979-80	58,742	5,680	9.67	17,243	1,092	6.33	2,751	88	3.20
1980-81	62,935	6,545	10.40	17,914	1,225	6.84	2,841	90	3.17
1981-82	66,990	8,140	12.5	18,289	1,539	8.41	2,887	126	4.36

+ Includes Engineer Degrees.
* Totals for women in these years include only numbers actually reported. The totals would be higher if all institutions had reported all categories. (Figures for later years are complete estimates).

TABLE 7-9

PERCENT OF ENGINEERING DEGREES EARNED 1976 AND 1982



FIELD: Engineering

SOURCE: Earned Degrees Conferred Series, 1947-48 thru 1980-81, U. S. Office of Education (NCES)

TABLE 7-10

DEGREES AWARDED IN ENGINEERING BY SEX, LEVEL OF DEGREE AND DISCIPLINE, 1947-48 - 1980-81

	AERONAUTICAL		CHEMICAL		CIVIL		ELECTRICAL		INDUSTRIAL		MECHANICAL		METALLURG.		MINING		TOTAL	
	B.S.	M.S.	B.S.	M.S.	B.S.	M.S.	B.S.	M.S.	B.S.	M.S.	B.S.	M.S.	B.S.	M.S.	B.S.	M.S.	B.S.	M.S.
1947-48 thru 1959-60																		
Total	16,628	3,596	39,570	7,808	67,540	9,365	106,170	15,477	13,014	3,024	114,156	10,591	4,082	1,129	1,623	174	435,534	63,909
Women	110	18	285	32	155	29	240	35	39	6	206	25	8	7	2	0	1,356	219
% Women	.66	.50	.72	.41	.23	.31	23	.23	.30	.20	.18	.24	.20	.62	12	-	.31	.34
1960-61 thru 1969-70																		
Total	18,620	6,842	30,544	8,876	54,099	17,727	110,405	34,771	23,906	10,657	82,008	19,552	5,479	2,510	1,125	543	372,020	123,075
Women	99	33*	310	59*	263	76*	407	117*	110	53*	241	46*	51	22*	2	7*	1,880	716*
% Women	.53	.48	1.01	66	.49	.43	.37	.34	46	.50	.29	.24	.93	.88	.18	1.29	.50	.58
1970-71 thru 1974-75																		
Total	8,745	3,001	17,510	5,340	36,959	12,971	58,528	19,360	15,935	8,668	40,734	10,367	2,687	1,380	1,115	318	220,704	79,876
Women	97	31	487	131	478	227	563	244	194	178	295	78	48	26	10	2	2,971	1,450
% Women	1.11	1.03	2.78	2.45	1.29	1.75	.96	1.26	1.22	2.05	.72	.75	1.79	1 88	90	.63	1.35	1.82
1975 76																		
Total	1,009	479	3,203	1,031	8,059	3,000	9,874	3,774	2,241	1,751	6,841	1,907	351	176	331	70	38,774	16,021
Women	29	10	276	39	252	99	193	104	87	81	147	27	23	10	8	2	1,317	557
% Women	2.87	2 08	8.61	3.78	3.12	3.30	1.95	2.76	3.88	4.63	2.14	1.41	6.55	5.68	2.41	2.85	3.40	3.47
1976-77																		
Total	1,078	385	3,524	1,086	8,228	2,964	9,936	3,788	2,240	1,609	7,703	1,952	350	165	404	77	40,936	15,961
Women	28	8	420	65	429	129	266	134	143	75	235	49	21	5	9	4	2,022	697
% Women	2 59	2.07	11.91	5.98	5.21	4.35	2.67	3 53	6.38	4.66	3.05	2 51	6.00	3.03	2.22	5.19	4 93	4.36
1977-78																		
Total	1,186	411	4,615	1,237	9,265	2,691	11,213	3,742	2,712	1,722	8,924	1,943	420	204	509	92	47,222	16,049
Women	61	11	716	87	690	132	435	142	323	138	466	57	44	14	22	3	3,479	840
% Women	5 14	2.68	15.52	7.03	7.45	4 91	3.88	3 80	11 91	8.01	5 22	2.93	10 48	6.86	4 32	3.26	7.37	5 23
1978-79																		
Total	1,386	372	5,655	1,149	9,941	2,655	12,440	3,596	2,804	1,502	10,171	1,878	503	198	600	92	53,445	15,242
Women	66	17	1,006	114	955	143	659	143	428	138	603	67	81	13	35	3	4,880	934
% Women	4.83	4.57	17.79	9.92	9.67	5 39	5 30	3.98	15 26	8.52	5.93	3.57	16.10	6.57	5.83	3.26	9.13	6.12
1979-80																		
Total	1,424	382	6,383	1,271	10,442	2,683	13,902	3,842	3,217	1,313	11,863	2,060	585	211	682	87	69,265	16,250
Women	82	9	1,215	133	991	197	902	184	545	133	882	98	100	21	51	3	6,438	1,142
% Women	5.76	2.36	19.03	10.46	9.49	7.34	6.49	4.79	16.94	10.13	7.43	4.76	17 09	9 95	7.48	3.45	9.29	7.03
1980-81																		
Total	1,809	408	6,527	1,267	10,678	2,891	14,938	3,901	3,833	1,631	13,329	2,291	603	193	750	84	75,000	16,709
Women	129	20	1,252	163	1,121	207	1,096	201	756	166	1,136	116	116	21	61	1	7,699	1,362
% Women	7.13	4.90	19.18	12.87	10.50	7.16	7.34	5.15	19.72	10.18	8.52	5.06	19.24	10.88	8.13	1.19	10.27	8.15
TOTAL																		
Total	51,885	15,876	117,531	29,065	215,211	56,947	347,406	92,251	69,902	31,877	295,729	55,616	15,060	6,166	7,139	1,537	1,352,900	363,092
Women	701	157	5,967	823	5,334	1,239	4,761	1,304	2,625	958	4,211	563	492	139	200	25	32,042	7,928
% Women	1.35	0.99	5.06	2.83	2.48	2.18	1.37	1.41	3.76	3.01	1.42	1.01	3.27	2.25	2.80	1.63	2.37	2.18

* Data not available for 1962-63 thru 1963-64.

FIELD: Engineering

SOURCE: Engineering and Technology Degrees 1982, Engineering Manpower Commission

TABLE 7-11

ENGINEERING DEGREES AWARDED BY CURRICULUM, 1981-82

CURRICULUM	TOTAL			WOMEN			BLACKS			HISPANICS			ASIAN/PACIFIC			AM. INDIAN		
	B.S.	M.S.*	Ph.D.	B.S.	M.S.*	Ph.D.	B.S.	M.S.*	Ph.D.	B.S.	M.S.*	Ph.D.	B.S.	M.S.*	Ph.D.	B.S.	M.S.*	Ph.D.
Aerospace	1,731	492	103	143	24	0	31	4	0	35	6	0	42	12	2	1	1	0
Agricultural	711	144	43	52	6	2	8	0	0	8	1	0	2	2	0	0	0	0
Architectural	469	42	0	77	2	0	34	0	0	14	0	0	15	1	0	1	0	0
Biomedical	541	199	43	138	33	7	7	1	0	10	1	2	19	7	0	1	0	0
Ceramic	260	55	12	44	5	0	5	1	0	1	0	0	11	2	0	1	0	0
Chemical	7,039	1,285	319	1,448	163	14	182	11	1	185	17	5	258	94	18	10	1	0
Computer	2,666	1,371	129	476	165	9	63	7	0	41	17	0	195	62	4	15	1	1
Civil	10,330	3,046	368	1,144	228	11	176	27	1	227	36	3	309	150	12	14	6	0
Electrical	16,094	4,281	549	1,280	239	11	525	59	4	144	57	5	881	240	30	19	2	0
Engineering Science	1,641	634	256	267	69	15	27	7	0	16	1	0	40	11	10	2	0	0
Environmental	254	412	68	56	55	7	0	2	0	0	11	0	2	12	3	2	1	0
General	2,360	649	114	314	58	3	54	14	0	79	6	2	179	21	7	2	0	0
Industrial	3,695	1,441	98	849	154	8	131	20	1	132	22	2	71	53	3	3	2	0
Marine	698	202	16	41	10	1	12	1	0	10	4	0	6	2	0	1	0	0
Mechanical	14,178	2,573	341	1,228	133	11	336	19	3	315	27	4	482	140	18	15	1	0
Mining	1,078	207	32	136	25	3	5	1	0	5	1	0	4	0	2	2	0	0
Materials/Metallurgy	914	507	196	166	57	12	22	1	1	21	4	0	11	26	6	2	0	0
Nuclear	426	317	127	36	29	5	4	3	0	8	3	1	14	7	4	0	0	1
Petroleum	1,256	147	23	117	6	2	6	1	0	48	2	1	31	1	2	0	0	0
Systems	346	490	44	70	85	5	9	8	0	8	2	1	4	4	3	0	0	0
Other	303	49	6	58	3	0	7	1	0	1	0	0	1	3	0	0	0	0
TOTAL	66,990	18,543	2,887	8,140	1,549	126	1,644	188	11	1,608	218	26	2,577	850	124	91	15	2

* Includes Engineer Degrees

FIELD: Engineering

SOURCE: Engineering and Technology Degrees, 1969 through 1982 Series, Engineering Manpower Commission

TABLE 7-12

NUMBER AND PERCENT OF ENGINEERING DEGREES GRANTED BY LEVEL OF DEGREE AND MINORITY GROUP, 1968-69 - 1981-82

	TOTAL		BLACK		SPANISH SURNAMED°		ASIAN/ PACIFIC		AMERICAN INDIAN		FOREIGN NATIONALS	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1968-69*												
Bachelor's	39,972	100.0	314	0.79			+				1,300	3.25
Master's	14,980	100.0	17	0.11							1,784	11.91
Ph.D.	3,387	100.0	2	0.06							410	12.11
1969-70*												
Bachelor's	42,966	100.0	378	0.88			+					
Master's	15,548	100.0	50	0.32								
Ph.D.	3,620	100.0	1	0.03								
1970-71*												
Bachelor's	43,167	100.0	407	0.94			+				1,565	3.62
Master's	16,383	100.0	47	0.29							2,952	18.02
Ph.D.	3,640	100.0	8	0.22							741	20.36
1971-72*												
Bachelor's	44,190	100.0	579	1.31			+				1,944	4.40
Master's**	17,356	100.0	78	0.45							2,973	17.13
Ph.D.	3,774	100.0	13	0.34							773	20.48
1972-73												
Bachelor's	43,429	100.0	657	1.51	866	1.99	684	1.58	46	0.11	2,136	4.92
Master's**	17,152	100.0	104	0.61	139	0.81	261	1.52	15	0.09	2,551	14.87
Ph.D.	3,587	100.0	13	0.36	12	0.34	55	1.53	1	0.03	708	19.74
1973-74												
Bachelor's	41,407	100.0	756	1.83	1,037	2.50	957	2.31	32	0.08	2,436	5.88
Master's**	15,885	100.0	158	0.99	192	1.21	425	2.68	4	0.03	3,099	19.51
Ph.D.	3,362	100.0	12	0.36	20	0.60	106	3.15	0	--	1,014	30.16
1974-75												
Bachelor's	38,210	100.0	734	1.92	1,060	2.77	883	2.31	44	0.12	2,466	6.45
Master's**	15,773	100.0	141	0.89	185	1.12	482	3.06	3	0.02	3,250	20.61
Ph.D.	3,039	100.0	17	0.55	28	0.92	141	4.64	2	0.07	891	29.32
1975-76												
Bachelor's	37,970	100.0	777	2.05	1,019	2.68	1,074	2.83	41	0.11	2,799	7.37
Master's**	16,506	100.0	154	0.93	191	1.16	782	4.74	14	0.09	3,691	22.36
Ph.D.	2,977	100.0	10	0.33	15	0.50	168	5.64	0	--	1,060	35.61
1976-77												
Bachelor's	40,095	100.0	844	2.11	1,035	2.58	1,146	2.86	36	0.09	2,996	7.47
Master's**	16,551	100.0	147	0.89	217	1.31	708	4.28	7	0.04	3,825	23.11
Ph.D.	2,814	100.0	16	0.57	22	0.78	158	5.62	1	0.04	995	35.36
1977-78												
Bachelor's	46,091	100.0	894	1.94	1,072	2.33	1,195	2.59	37	0.08	3,084	6.69
Master's**	16,182	100.0	202	1.25	243	1.50	797	4.93	4	0.03	3,720	22.99
Ph.D.	2,573	100.0	15	0.58	25	0.97	175	6.80	3	0.12	874	33.97
1978-79												
Bachelor's	52,598	100.0	1,076	2.05	1,212	2.30	1,532	2.91	59	0.11	3,788	7.20
Master's**	15,624	100.0	157	1.01	213	1.36	675	4.32	9	0.06	3,944	25.24
Ph.D.	2,815	100.0	19	0.68	22	0.78	177	6.29	0	--	929	33.00
1979-80												
Bachelor's	58,742	100.0	1,320	2.25	1,332	2.27	1,922	3.27	60	0.10	4,895	8.33
Master's**	17,243	100.0	167	0.97	247	1.43	827	4.80	4	0.02	4,512	26.17
Ph.D.	2,751	100.0	19	0.69	25	0.91	154	5.60	1	0.04	982	35.70
1980-81												
Bachelor's	62,935	100.0	1,445	2.30	1,513	2.40	2,267	3.60	90	0.14	5,622	8.93
Master's**	17,914	100.0	183	1.02	281	1.57	968	5.40	8	0.04	4,677	26.11
Ph.D.	2,841	100.0	16	0.56	20	0.70	148	5.21	3	0.11	1,054	37.10
1981-82												
Bachelor's	66,990	100.0	1,644	2.45	1,608	2.40	2,577	3.85	91	0.14	5,410	8.08
Master's	18,543	100.0	188	1.01	218	1.18	850	4.58	15	0.80	5,284	28.50
Ph.D.	2,887	100.0	11	0.38	26	0.90	124	4.30	2	0.07	1,167	40.42

* Totals for minority groups in these years include only numbers actually reported. The totals would be higher if all institutions had reported all categories. ** Includes engineer degrees.

\+ Data were not broken out by any minority group except blacks, prior to 1972-73.

o Includes Univ. of Puerto Rico as follows: 1973-1981 Bachelor's: 343, 397, 416, 339, 333, 324, 404, 329, 320
1973-1981 Master's: 13, 6, 2, 7, 6, 9, 15, 7, 1

FIELD: Engineering

SOURCE: Engineering and Technology Degrees, 1975, 1976, 1977, 1978, 1979 and 1980, Engineering Manpower Commission

TABLE 7-13

ENGINEERING DEGREES AWARDED BY CURRICULUM, LEVEL, MINORITY GROUP AND SEX, 1975-1980

CURRICULUM	TOTAL DEGREES			WOMEN			BLACK			HISPANIC†			ASIAN			AM. INDIAN		
	B.S.	M.S.*	Ph.D.	B.S.	M.S.*	Ph.D.	B.S.	M.S.*	Ph.D	B.S.	M.S*	Ph.D.	B.S.	M.S.*	Ph.D.	B.S.	M.S.*	Ph.D.
Aerospace	6,156	2,518	731	248	49	8	98	18	4	83	16	5	82	56	26	5	2	1
Agricultural	3,241	808	267	160	19	1	15	6	2	61	12	3	22	19	5	11	1	0
Architectural	2,140	162	5	171	6	0	145	1	0	76	3	0	58	5	0	1	0	0
Biomedical	1,843	1,084	317	296	45	9	35	6	0	19	12	0	74	43	15	5	0	0
Ceramic	1,095	282	100	159	13	0	9	0	0	10	1	1	10	10	6	0	1	0
Chemical	26,967	6,975	1,872	3,557	383	41	476	34	13	356	94	14	847	367	128	24	1	0
Civil	53,592	17,313	1,949	3,284	662	29	718	179	14	1,053	235	25	1,522	738	91	58	4	0
Computer	7,547	5,509	805	909	658	46	168	64	2	100	33	11	559	296	45	10	1	0
Electrical	66,728	21,465	3,483	2,429	537	61	1,940	265	32	1,358	272	29	2,133	937	210	67	10	1
Engr. Science	6,027	3,186	1,406	550	228	39	99	21	4	76	16	4	121	105	69	7	1	0
Environmental	1,416	3,183	297	211	266	11	10	12	1	13	40	6	18	89	13	0	1	0
General	10,933	3,854	622	814	170	16	201	33	3	214	42	1	432	211	35	5	0	1
Industrial	12,961	8,738	667	1,312	422	27	266	68	4	303	120	7	317	321	16	12	3	1
Marine	4,017	1,066	113	75	18	1	39	15	0	37	11	0	25	29	10	5	0	0
Mechanical	52,262	12,205	1,950	2,353	272	20	1,100	108	7	858	130	8	1,158	578	106	51	7	2
Mining	3,743	857	137	272	51	5	15	21	0	30	5	0	14	5	5	0	3	0
Materials/Metal.	4,298	2,664	1,273	458	148	33	74	14	2	132	30	12	102	108	98	6	2	1
Nuclear	2,869	2,596	619	124	88	9	33	17	2	30	24	4	50	86	27	4	3	0
Petroleum	3,420	1,005	117	184	18	1	35	7	1	69	8	0	40	22	5	4	0	0
Systems	1,165	2,085	257	128	184	10	21	20	3	13	30	0	30	81	9	0	0	0
Other	1,182	361	54	167	89	9	148	57	8	180	68	7	229	186	60	4	2	6
TOTAL	273,706	100,991	17,068	17,891	4,379	376	5,645	969	96	4,992	1,257	137	7,752	4,281	973	277	42	13

* Includes Engineer Degrees

† Does not include University of Puerto Rico, which awarded 2,014 Bachelor's; 53 master's, and 16 Ph.D.'s during this 6-year period

FIELD: Engineering

SOURCE: Engineering and Technology Degrees 1980, 1981 and 1982, Engineering Manpower Commission

TABLE 7-14

LEADING SCHOOLS IN NUMBER OF ENGINEERING DEGREES AWARDED TO WOMEN, 1982

	Bachelor's			Master's*			Ph.D			Total Degrees			Rank in		
	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W	'78	'80	'81
Texas A&M	1,285	201	15.6	203	45	22.2	42	2	4.8	1,530	248	16.2	5	3	4
Purdue	1,313	203	15.5	330	29	8.8	95	3	3.2	1,738	235	13.5	3	1	2
Georgia Tech.	1,313	198	15.1	376	32	8.5	31	1	3.2	1,720	231	13.4	7	7	1
U. of Calif.-Berkeley	868	156	18.0	576	62	10.8	141	4	2.8	1,585	222	14.0	8	15	12
U. of Illinois-Urbana	1,452	178	12.2	482	30	6.2	150	2	1.3	2,084	210	10.1	2	9	3
Mass. Inst. of Tech.	721	117	16.2	671	85	12.7	169	9	5.3	1,561	202	12.9	1	2	6
Pennsylvania State	1,322	155	11.7	181	12	6.6	39	3	7.8	1,542	180	11.7	9	8	5
U. of Michigan	997	129	12.9	454	38	8.4	95	2	2.1	1,546	169	10.9	6	4	9
Virginia Poly. Inst.	936	128	13.7	207	26	12.6	37	0	0.0	1,180	154	13.1	+	14	17
Ohio State	813	118	14.5	294	32	10.9	56	2	3.6	1,163	152	13.1	24	29	18
Michigan State	674	147	21.8	84	5	6.0	12	0	0.0	770	152	19.7	11	5	7
Stanford	287	53	18.5	794	79	9.9	130	6	4.6	1,211	138	11.4	4	6	8
Cornell	598	96	16.1	314	37	11.8	58	3	5.2	970	136	14.0	10	11	11
U. of Wisconsin	768	98	12.8	222	22	9.9	61	2	3.3	1,051	122	11.6	29	31	19
U. of Washington	623	105	16.9	165	16	9.7	20	0	0.0	808	121	15.0	16	13	16
U. of Missouri-Rolla	882	109	12.4	152	5	3.3	5	0	0.0	1,039	114	11.0	23	28	13
North Carolina State	780	94	12.0	143	9	6.3	38	5	13.2	961	108	11.2	+	34	27
Auburn	703	97	13.8	54	8	14.8	4	0	0.0	761	105	13.8	+	+	15
U. of Colorado	634	89	14.0	123	12	9.8	15	0	0.0	772	101	13.1	21	17	10
Northeastern	658	67	10.2	228	21	9.2	1	0	0.0	887	98	11.0	+	+	§
U. of Calif.-Davis	451	75	16.6	162	20	12.3	40	2	5.0	653	97	14.9	+	21	32
Michigan Tech	785	93	11.8	52	4	7.7	4	0	0.0	841	97	11.5	26	33	21
Rensselaer Polytech.	620	76	12.3	346	21	6.1	44	0	0.0	1,010	97	9.6	+	+	§
U. of Pittsburgh	477	87	18.2	166	10	6.0	26	0	0.0	669	97	14.5	12	10	24
Columbia	283	40	14.1	267	53	19.9	32	0	0.0	582	93	16.0	+	+	§
Northwestern	301	68	22.6	173	21	12.1	73	3	4.1	547	92	16.8	15	39	30
Gen. Motors Inst.	312	92	29.5	0	0	0.0	0	0	0.0	312	92	29.5	+	37	34
U. of Virginia	274	61	22.3	174	29	16.7	23	0	0.0	471	90	19.1	+	12	20
U. of Minnesota	790	81	10.3	122	9	7.4	29	0	0.0	941	90	9.6	13	32	37
Clarkson	593	79	13.3	42	5	11.9	8	1	12.5	643	85	13.2	+	26	38
Colorado School Mines	387	65	16.8	102	17	16.7	19	2	10.5	508	84	16.5	+	20	29
SUNY-Buffalo	521	70	13.4	100	9	9.0	25	2	8.0	646	81	12.5	+	35	36
U. of Florida	552	62	11.2	138	15	10.9	23	0	0.0	713	77	10.8	30	36	27
Iowa State	733	65	8.9	105	9	8.6	42	3	7.1	880	77	8.8	+	25	25
Carnegie Mellon	361	58	16.1	141	17	12.1	41	1	2.4	379	76	20.1	+	16	23
U. of Calif.-L.A.	357	44	12.3	246	21	8.5	74	1	1.4	604	73	12.1	+	+	28
U. of Massachusetts	410	62	15.1	97	10	10.3	14	1	7.1	521	73	14.0	+	+	§
TOTAL ALL SCHOOLS	66,990	8,140	12.2	18,543	1,549	8.4	2,887	126	4.4	88,420	9,815	11.1			

* Includes Engineer Degrees + Below 30th § Below 43rd

FIELD: Engineering

Source: Engineering and Technology Degrees 1980, 1981 and 1982, Engineering Manpower Commission

TABLE 7-15

Leading Engineering Schools in Awards of Bachelors Degrees to Minorities, 1982

	Total Degrees	Black	Hispanic*	Asian	Indian	Total Minor.	% Minority	Rank in 1977	Rank in 1980	Rank in 1981
U. of California-Berkeley	868	12	12	245	1	270	31.1	1	1	2
CCNY	278	72	34	45	0	151	54.3	2	2	1
U. of Hawaii	193	0	0	148	0	148	76.7	4	3	3
Georgia Tech	1,313	70	25	26	1	122	9.3	+	15	6
Prairie View, Texas	131	122	0	0	0	122	93.1	17	6	4
Calif. St. Pomona	405	5	24	82	2	113	27.9	+	§	•
U. of Texas	829	9	69	23	0	101	12.2	8	5	8
U. of Tennessee	558	37	16	43	0	96	17.2	+	§	•
U. of Washington	623	4	2	87	1	94	15.1	+	22	5
Illinois Inst. Technology	355	48	7	37	0	92	25.9	+	13	20
Massachusetts Inst. Technology	721	33	12	45	2	92	12.8	10	9	19
U. of Illinois-Urbana	1,452	9	11	71	0	91	6.3	8	7	10
U. of California-L.A.	357	4	11	72	0	87	24.4	18	20	11
North Carolina A&T	129	72	6	0	0	78	60.5	+	14	21
U. of Texas-El Paso	165	1	66	11	0	78	47.3	15	16	13
Polytechnical Inst. of New York	364	19	11	45	0	75	20.6	3	4	22
Cornell	598	26	7	40	1	74	12.4	+	§	31
U. of California-Davis	451	2	6	52	14	74	16.4	+	11	14
Purdue	1,313	30	13	28	2	73	5.6	+	§	•
New Jersey Tech.	454	22	21	29	0	72	15.9	6	8	18
Pratt Institute	152	23	16	24	0	63	41.4	+	21	30
Howard	94	59	0	2	0	61	64.9	+	26	12
California State-Long Beach	285	4	9	47	1	61	21.4	+	§	•
U. of Colorado	634	4	15	37	2	58	9.1	+	§	25
U. of Florida	552	10	31	15	1	57	10.3	13	19	24
U. of Miami	228	7	47	2	0	56	24.6	+	25	28
Southern A&M	176	55	0	0	0	55	31.3	+	10	15
U. of California-Irvine	202	3	10	42	0	55	27.2	+	§	•
Stanford	287	13	17	23	2	55	19.2	5	23	27
Texas A&I	190	2	46	5	0	53	27.9	+	§	•
Texas A&M	1,285	5	43	5	0	53	4.1	+	§	•
SUNY-Stony Brook	369	6	5	40	0	51	13.8	+	§	•
Tennessee State	62	20	0	31	0	51	82.3	+	§	49
Northwestern	301	25	5	19	0	49	16.3	+	§	•
General Motors Institute	312	27	7	14	1	49	15.7	+	§	•
New Mexico State	205	2	41	1	2	46	22.4	+	§	•
George Washington	105	4	0	40	0	44	41.9	+	§	•
U. of New Mexico	219	1	42	0	1	44	20.1	+	§	•
U. of Oklahoma	371	5	28	9	2	44	11.8	+	§	•
TOTAL U.S.	66,990	1,646	1,270	2,577	91	5,584	8.3			

* Excludes U. of Puerto Rico + Below 20th § Below 27th • Below 31st

FIELD: Engineering

SOURCE: Digest of Education Statistics 1977-1982 and Fall Enrollment in Colleges and Universities, 1980 (NCES) and Engineering Enrollments Series, 1970-81, Engineering Manpower Commission and National Center for Education Statistics, Press Release, May 1983

TABLE 7-16

ENGINEERING ENROLLMENTS RELATED TO HIGH SCHOOL GRADUATES, ENTERING FRESHMEN AND TOTAL ENROLLMENTS, BY SEX, 1970 - 1981

YEAR	HIGH SCHOOL GRADUATES		FIRST TIME ENROLLMENT				TOTAL ENROLLMENT				First Time Enrollment as % of H.S. Graduates		Engineering as % of First Time Enrollment		Engineering as % of Total Enrollment	
			All Fields		Engineering		All Fields		Engineering							
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
1970 Number	1,433,000	1,463,000	983,794	796,325	70,204	1,457	5,043,642	3,497,245	314,313	4,682		61.3		4.0		3.7
% of Total	49.5	50.5	55.3	44.7	98.0	2.0	58.8	41.2	98.5	1.5						
% of Same Sex											68.7	54.2	6.6	0.2	6.3	0.1
1971 Number	1,506,000	1,530,000	967,859	797,766	57,025	1,541	5,207,004	3,741,640	287,551	5,303		58.2		3.3		3.3
% of Total	49.6	50.4	54.8	45.2	97.4	2.6	58.2	41.8	98.2	1.8						
% of Same Sex											64.3	52.1	5.5	0.2	5.6	0.1
1972 Number	1,490,000	1,516,000	928,804	811,634	50,558	1,542	5,238,757	3,976,103	264,143	6,010		55.6		3.0		2.9
% of Total	49.6	50.4	53.4	46.6	97.0	3.0	56.9	43.1	97.8	2.2						
% of Same Sex											62.3	53.5	5.0	0.2	5.2	0.2
1973 Number	1,602,000	1,609,000	930,783	826,070	49,508	2,417	5,371,052	4,231,071	255,259	7,744		54.7		3.0		2.7
% of Total	49.9	50.1	53.0	47.0	95.3	4.7	55.9	44.1	97.1	2.9						
% of Same Sex											58.1	51.3	4.7	0.3	4.7	0.2
1974 Number	1,513,000	1,564,000	972,707	881,735	59,178	4,266	5,622,429	4,601,300	265,590	12,397		60.2		3.4		2.7
% of Total	49.2	50.8	52.5	47.5	93.3	6.7	55.0	45.0	95.5	4.5						
% of Same Sex											64.3	56.4	5.2	0.5	4.9	0.3
1975 Number	1,541,000	1,599,000	991,914	918,211	68,613	6,730	6,148,997	5,035,862	292,955	19,923		60.8		3.9		2.8
% of Total	49.1	50.9	51.9	48.1	91.1	8.9	55.0	45.0	93.6	6.4						
% of Same Sex											64.4	57.4	5.6	0.7	5.1	0.4
1976 Number	1,554,000	1,601,000	996,000	926,000	73,705	8,545	5,810,828	5,210,309	315,030	25,970		61.0		4.3		3.1
% of Total	49.3	50.7	51.8	48.2	89.6	9.4	52.8	47.2	92.4	7.6						
% of Same Sex											63.5	58.7	5.6	0.9	5.9	0.5
1977 Number	1,548,000	1,606,000	1,172,147	1 259,453	78,859	9,921	5,789,076	5,496,771	340,265	33,917		77.1		3.6		3.3
% of Total	49.1	50.9	48.2	51.8	88.8	10.2	51.3	48.7	90.9	9.1						
% of Same Sex											75.2	78.4	6.7	0.8	5.9	0.6
1978 Number	1,535,000	1,599,000	1,141,777	1,247,850	84,016	11,789	5,640,998	5,619,094	356,438	40,156		76.2		4.0		3.5
% of Total	49.0	51.0	51.0	49.0	87.7	12.3	50.2	49.8	89.9	10.1						
% of Same Sex											74.4	78.0	7.4	0.9	6.3	0.7
1979 Number	1,531,800	1,602,400	1,194,534	1,343,585	89,693	14,031	5,682,877	5,887,022	383,876	49,575		79.9		4.1		3.7
% of Total	48.9	51.1	47.1	52.9	86.5	13.5	49.1	50.9	88.6	11.4						
% of Same Sex											77.0	82.6	7.6	1.1	6.7	0.8
1980 Number	1,355,198	1,401,425	1,233,446	1,391,629	94,145	16,004	5,874,374	6,222,521	411,709	58,220		95.2		4.2		3.8
% of Total	49.2	50.8	47.0	53.0	85.5	14.5	48.6	51.4	87.6	12.4						
% of Same Sex											91.0	99.3	7.6	1.2	7.0	0.9
1981 Number	1,339,922	1,384,642			97,042	18,238	5,984,211	6,374,005	431,202	66,790						4.0
% of Total	49.2	50.8			84.2	15.8	48.4	51.6	86.6	13.4						
% of Same Sex															7.2	1.0

FIELD: Engineering

SOURCE: Supply and Demand for Scientists and Engineers, Scientific Manpower Commission, 1982.

TABLE 7-17

BACHELOR'S DEGREES IN ENGINEERING AS A RATIO OF FRESHMAN ENROLLMENT FOUR YEARS EARLIER

Freshman Class Year Fall	Bachelor's Degree Year	Men			Women		
		Freshmen	B.S. Degrees	Ratio	Freshmen	B.S. Degrees	Ratio
1969	1973	72,932	42,805	58.7	1,181	624	52.8
1970	1074	70,204	40,663	57.9	1,457	744	51.1
1971	1975	57,025	37,332	65.5	1,541	878	57.0
1972	1976	50,558	36,594	72.4	1,542	1,376	89.2
1973	1977	49,512	38,134	77.0	2,417	1,961	81.1
1974	1978	59,178	42,815	72.4	4,266	3,280	76.9
1975	1979	68,613	47,873	69.8	6,730	4,716	70.1
1976	1980	73,705	53,062	72.0	8,545	5,680	66.5
1977	1981	78,859	56,390	71.5	9,921	6,557	66.1
1978	1982	87,016	57,548*	66.1	11,789	7,825**	66.4
1979	1983	89,693	62,068†	69.2§	14,031	9,513†	67.8§
1980	1984	94,145	65,148†	69.2§	16,004	10,851†	67.8§
1981	1985	97,042	67,153†	69.2§	18,238	12,365†	67.8§

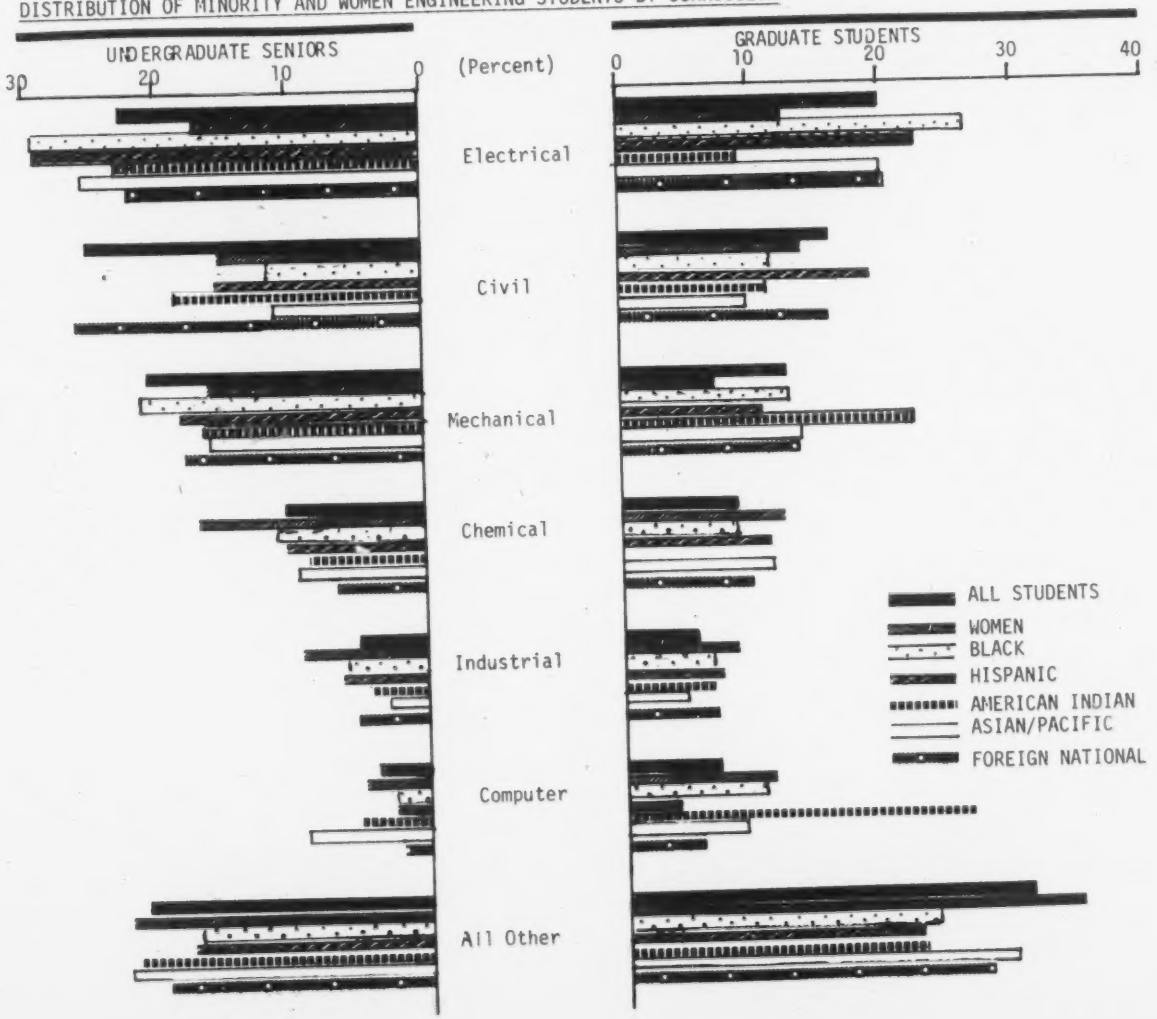
* Estimated at 82.5% of Jr. Year Enrollments. ** Estimated at 76.2% of Jr. Year Enrollments.
§ Average of most recent 4 years. † Estimated ratio times Freshman Enrollment.

FIELD: Engineering

SOURCE: Engineering and Technology Enrollments 1980, Part II, Engineering Manpower Commission of AAES

TABLE 7-18

DISTRIBUTION OF MINORITY AND WOMEN ENGINEERING STUDENTS BY CURRICULUM



FIELD: Engineering

SOURCE: Engineering and Technology Enrollments Series, 1969-1981, Engineering Manpower Commission

TABLE 7-19

NUMBER AND PERCENT OF WOMEN AND MINORITIES ENROLLED IN ENGINEERING, BY DEGREE LEVEL, FALL 1969-1981

	First Year		Second Year		Third Year		4/5th Year		UNDERGRADUATE STUDENTS Total Full Time		UNDERGRADUATE STUDENTS Total Part Time		GRADUATE STUDENTS Total Full Time		GRADUATE STUDENTS Total Part Time	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
ALL STUDENTS																
FALL																
1969	74,113	100.0	52,972	100.0	50,039	100.0	56,406	100.0	233,530	100.0	20,984	100.0	34,312	100.0	32,645	100.0
1970	71,661	100.0	53,419	100.0	49,855	100.0	56,795	100.0	231,730	100.0	18,445	100.0	30,018	100.0	30,802	100.0
1971	58,566	100.0	47,948	100.0	48,543	100.0	55,768	100.0	210,825	100.0	18,222	100.0	36,505	100.0	27,302	100.0
1972	52,100	100.0	42,272	100.0	45,874	100.0	54,481	100.0	194,727	100.0	14,149	100.0	36,337	100.0	24,940	100.0
1973	51,929	100.0	40,519	100.0	41,673	100.0	52,588	100.0	186,705	100.0	15,692	100.0	34,492	100.0	26,114	100.0
1974	63,444	100.0	45,939	100.0	43,007	100.0	48,715	100.0	201,099	100.0	16,689	100.0	32,627	100.0	27,572	100.0
1975	75,343	100.0	55,891	100.0	49,338	100.0	50,807	100.0	231,379	100.0	17,041	100.0	37,285	100.0	21,173	100.0
1976	82,250	100.0	63,003	100.0	56,835	100.0	55,747	100.0	257,835	100.0	19,844	100.0	36,479	100.0	26,842	100.0
1977	88,780	100.0	70,326	100.0	64,721	100.0	65,421	100.0	289,248	100.0	20,634	100.0	39,235	100.0	25,055	100.0
1978	98,805	100.0	72,150	100.0	69,816	100.0	73,466	100.0	311,237	100.0	22,843	100.0	38,381	100.0	24,133	100.0
1979	103,724	100.0	78,594	100.0	74,928	100.0	83,242	100.0	340,488	100.0	25,811	100.0	41,384	100.0	25,768	100.0
1980	110,149	100.0	84,982	100.0	80,024	100.0	89,962	100.0	365,117	100.0	32,227	100.0	44,335	100.0	23,250	100.0
1981	115,280	100.0	87,519	100.0	86,633	100.0	98,145	100.0	387,577	100.0	32,825	100.0	47,772	100.0	29,818	100.0
WOMEN																
1969	1,181	1.6	719	1.4	540	1.1	492	0.9	3,061	1.3	184	0.9	718	2.1	468	1.4
1970	1,547	2.0	817	1.5	548	1.2	522	0.9	3,569	1.5	158	0.9	555	1.5	400	1.3
1971	1,541	2.6	964	2.0	725	1.5	583	1.0	3,983	1.9	220	1.2	712	2.0	388	1.4
1972	1,542	3.0	1,119	2.6	970	2.1	802	1.5	4,487	2.3	206	1.5	830	2.3	487	2.0
1973	2,417	4.7	1,487	3.7	1,140	2.7	1,020	1.9	6,064	3.2	264	1.7	869	2.6	547	2.2
1974	4,266	6.7	2,467	5.4	1,724	4.0	1,362	2.8	9,828	4.9	430	2.6	1,308	4.0	831	3.0
1975	6,730	8.9	4,197	7.5	2,862	5.8	2,063	4.1	15,852	6.9	1,628	9.6	1,585	4.3	858	3.2
1976	8,545	10.4	5,848	9.3	4,407	7.8	3,136	5.6	21,936	8.5	1,258	6.3	1,693	4.6	1,083	4.0
1977	9,921	11.2	7,537	10.7	6,193	9.6	5,122	7.8	28,773	9.9	1,192	5.8	2,661	6.8	1,291	5.2
1978	11,789	12.3	8,447	11.7	7,453	10.7	6,829	9.3	34,518	11.1	1,414	6.2	2,930	7.6	1,294	5.4
1979	14,031	13.5	10,400	13.2	8,853	11.8	8,743	10.5	42,027	12.3	2,404	9.3	3,409	8.2	1,735	6.7
1980	16,004	14.5	12,094	14.2	10,269	12.8	10,577	11.8	48,944	13.4	2,918	9.1	4,014	9.1	2,344	10.1
1981	18,238	15.8	13,285	15.2	12,023	13.9	12,503	12.7	56,049	14.5	3,220	9.8	4,627	9.7	2,894	9.7
BLACK																
1969	977	1.3	704	1.3	430	0.9	422	0.7	2,757	1.2	168	0.8	81	0.2	88	0.3
1070	1,424	2.0	811	1.5	664	1.3	599	1.1	3,753	1.6	354	1.9	171	0.5	119	0.4
1971	1,289	2.2	926	1.9	693	1.4	614	1.1	4,136	2.0	349	1.9	192	0.5	154	0.6
1972	1,477	2.8	965	2.3	838	1.8	695	1.3	4,356	2.2	491	3.5	238	0.6	181	0.7
1973	2,130	4.1	1,324	3.3	1,056	2.5	998	1.9	5,508	3.0	503	3.2	339	1.0	229	0.9
1974	2,848	4.5	1,632	3.6	1,221	2.8	1,126	2.3	6,827	3.4	549	3.3	356	1.1	407	1.5
1975	3,840	5.1	1,980	3.5	1,366	2.8	1,203	2.4	8,389	3.6	658	3.9	390	1.0	361	1.3
1976	4,372	5.3	2,483	3.9	1,633	2.9	1,340	2.4	9,828	3.8	632	3.2	427	1.2	332	1.2
1977	4,728	5.3	2,928	4.2	2,104	3.3	1,628	2.5	11,388	3.9	613	3.0	438	1.1	487	1.9
1978	5,493	5.7	3,103	4.3	2,330	3.3	2,028	2.8	12,954	4.2	726	3.2	450	1.2	393	1.6
1979	6,339	6.1	3,451	4.4	2,687	3.6	2,309	2.8	14,786	4.3	1,056	4.1	480	1.2	348	1.4
1980	6,661	6.0	3,963	4.7	2,903	3.6	2,654	3.0	16,181	4.4	1,425	4.4	588	1.3	399	1.7
1981	7,015	6.1	4,398	5.0	3,290	3.8	2,908	3.0	17,611	4.5	1,300	4.0	553	1.2	506	1.7

TABLE 7-19 (continued)

NUMBER AND PERCENT OF WOMEN AND MINORITIES ENROLLED IN ENGINEERING, BY DEGREE LEVEL, FALL 1969-1981

	First Year		Second Year		Third Year		4/5th Year		UNDERGRADUATE STUDENTS Total Full Time		UNDERGRADUATE STUDENTS Total Part Time		GRADUATE STUDENTS Total Full Time		GRADUATE STUDENTS Total Part Time	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
ALL STUDENTS																
FALL																
1973	51,929	100.0	40,519	100.0	41,673	100.0	52,588	100.0	186,705	100.0	15,692	100.0	34,492	100.0	26,114	100.0
1974	63,444	100.0	45,939	100.0	43,007	100.0	48,715	100.0	201,099	100.0	16,689	100.0	32,627	100.0	27,572	100.0
1975	75,343	100.0	55,891	100.0	49,338	100.0	50,807	100.0	231,379	100.0	17,041	100.0	37,285	100.0	21,173	100.0
1976	82,250	100.0	63,003	100.0	56,835	100.0	55,747	100.0	257,835	100.0	19,844	100.0	36,479	100.0	26,842	100.0
1977	88,780	100.0	70,326	100.0	64,721	100.0	65,421	100.0	289,248	100.0	20,634	100.0	39,235	100.0	25,055	100.0
1978	98,805	100.0	72,150	100.0	69,816	100.0	73,466	100.0	311,237	100.0	22,843	100.0	38,381	100.0	24,133	100.0
1979	103,724	100.0	78,594	100.0	74,928	100.0	83,242	100.0	340,488	100.0	25,811	100.0	41,384	100.0	25,768	100.0
1980	110,149	100.0	84,982	100.0	80,024	100.0	89,962	100.0	365,117	100.0	32,227	100.0	44,335	100.0	23,250	100.0
1981	115,280	100.0	87,519	100.0	86,633	100.0	98,145	100.0	387,577	100.0	32,825	100.0	47,772	100.0	29,818	100.0
HISPANIC*																
1973	1,508	2.9	1,260	3.1	1,151	2.8	2,035	3.9	5,954	3.2	367	2.3	282	0.8	223	0.9
1974	1,930	3.0	1,314	2.9	1,276	3.0	2,060	4.2	6,580	3.3	483	2.9	309	0.9	337	1.2
1975	2,169	2.9	1,639	2.9	1,372	2.8	2,127	4.2	7,307	3.2	430	2.5	407	1.1	318	1.2
1976	1,786	2.2	1,255	2.0	1,026	1.8	1,091	2.0	5,138	2.0	419	2.1	401	1.1	261	1.0
1977	2,645	3.0	1,822	2.6	1,702	2.6	2,326	3.6	8,495	2.9	393	1.9	475	1.2	390	1.6
1978	3,296	3.4	2,078	2.9	1,930	2.8	2,527	3.4	9,831	3.2	570	2.5	426	1.1	312	1.3
1979	3,768	3.6	2,354	3.0	2,230	3.0	2,775	3.3	11,127	3.3	941	3.6	472	1.1	381	1.5
1980	4,208	3.8	2,543	3.0	2,282	2.9	2,827	3.1	11,860	3.2	1,045	3.2	476	1.1	403	1.7
1981	4,768	4.1	2,976	3.4	2,598	3.0	3,273	3.3	13,615	3.5	744	2.3	595	1.2	408	1.4
ASIAN/PACIFIC																
1973	884	1.7	741	1.8	931	2.2	1,208	2.3	3,764	2.0	311	2.0	868	2.5	862	3.3
1974	1,130	1.8	842	1.8	966	2.2	1,024	2.1	3,962	2.0	286	1.7	909	2.8	1,048	3.8
1975	1,155	1.5	1,007	1.8	1,037	2.1	1,094	2.2	4,293	1.9	350	2.1	1,318	3.5	854	3.1
1976	1,560	1.9	1,363	2.2	1,310	2.3	1,392	2.5	5,625	2.2	509	2.6	1,422	3.9	836	3.1
1977	1,847	2.1	1,923	2.7	1,796	2.8	1,804	2.8	7,370	2.5	403	2.0	1,560	4.0	952	3.8
1978	2,169	2.3	2,006	2.8	2,200	3.1	2,265	3.1	8,640	2.8	377	1.7	1,533	4.0	973	4.0
1979	3,133	3.0	2,578	3.3	2,800	3.7	2,966	3.6	11,471	3.4	772	3.0	1,603	3.9	1,033	4.0
1980	2,889	2.6	2,791	3.3	2,746	3.4	3,253	3.6	11,679	3.2	1,093	3.4	1,657	3.7	1,453	6.2
1981	4,035	3.5	3,247	3.7	3,381	3.9	3,799	3.9	14,462	3.7	1,353	4.1	2,217	4.6	1,591	5.3
AMERICAN INDIAN																
1973	67	0.1	61	0.2	65	0.2	88	0.2	281	0.2	17	0.1	37	0.1	24	0.1
1974	102	0.2	73	0.2	72	0.2	76	0.2	323	0.2	24	0.1	19	0.1	41	0.1
1975	120	0.2	73	0.1	65	0.1	70	0.1	328	0.1	27	0.2	27	0.1	22	0.1
1976	171	0.2	93	0.2	93	0.2	89	0.2	446	0.2	32	0.1	25	0.1	26	0.1
1977	244	0.3	156	0.2	118	0.2	100	0.2	618	0.2	42	0.2	39	0.1	35	0.1
1978	225	0.2	161	0.2	121	0.2	118	0.2	625	0.2	59	0.3	34	0.1	31	0.1
1979	317	0.3	146	0.2	152	0.2	144	0.2	759	0.2	60	0.2	57	0.1	17	0.1
1980	365	0.3	187	0.2	174	0.2	177	0.2	903	0.2	117	0.4	45	0.1	63	0.2
1981	412	0.4	189	0.2	176	0.2	193	0.2	970	0.3	113	0.3	42	0.1	53	0.2
FOREIGN NATIONAL																
1977													11,300	28.8	1,962	7.8
1978													11,532	30.0	2,361	9.8
1979	4,984	4.8	4,771	6.1	5,583	7.5	6,298	7.6	21,636	6.4	1,125	4.4	14,061	34.0	1,555	6.0
1980	5,095	4.6	5,436	6.4	6,496	8.1	7,627	8.5	24,654	6.8	1,474	4.6	16,120	36.4	2,690	11.6
1981	4,974	4.3	5,611	6.4	6,831	7.9	7,951	8.1	25,367	6.5	1,218	3.7	17,985	37.6	2,577	8.6

* Includes enrollment at the University of Puerto Rico.

FIELD: Engineering

SOURCE: Engineering and Technology Enrollments, Fall 1981, Part II, Engineering Manpower Commission

TABLE 7-20

NUMBER AND PERCENT OF WOMEN AND MINORITIES ENROLLED FULL TIME BY CURRICULUM AND LEVEL, FALL 1981

Curriculum	Total All Students		Women		Black		Hispanic		Am. Indian		Asian/ Pacific	
	UG	Grad	UG	Grad	UG	Grad	UG	Grad	UG	Grad	UG	Grad
Aerospace	12,524	1,502	1,002	68	379	12	351	21	33	1	411	47
%	100.0	100.0	8.0	4.5	3.0	0.8	2.8	1.4	0.3	0.1	3.3	3.1
Agricultural	3,264	587	298	30	20	1	44	8	4	-	24	13
%	100.0	100.0	9.1	5.1	0.6	0.2	1.3	1.4	0.1	-	0.7	2.2
Architectural	3,497	100	629	4	525	-	82	-	4	-	47	1
%	100.0	100.0	18.0	4.0	15.0	-	2.3	-	0.1	-	1.3	1.0
Bio-Engineering	3,420	746	1,094	138	138	14	97	12	10	1	241	28
%	100.0	100.0	32.0	18.5	4.0	1.9	2.8	1.6	0.3	0.1	7.0	3.8
Ceramic	1,050	183	228	28	23	1	6	4	2	-	19	5
%	100.0	100.0	21.7	15.3	2.2	0.5	0.6	2.2	0.2	-	1.8	2.7
Chemical	34,669	4,803	8,607	561	1,492	48	1,415	64	74	11	1,257	276
%	100.0	100.0	24.8	11.7	4.3	1.0	4.1	1.3	0.2	0.2	3.6	5.7
Civil	44,404	6,743	5,746	656	1,510	65	1,661	105	132	6	1,277	256
%	100.0	100.0	12.9	9.7	3.4	1.0	3.7	1.6	0.3	0.1	2.9	3.8
Computer	17,109	3,636	3,691	638	855	52	681	41	40	2	1,204	331
%	100.0	100.0	21.6	17.5	5.0	1.4	4.0	1.1	0.2	0.1	7.0	9.1
Electrical	86,146	9,656	8,263	576	5,246	176	3,816	153	208	8	4,372	503
%	100.0	100.0	9.6	6.0	6.1	1.8	4.4	1.6	0.2	0.1	5.1	5.2
Engr. Science	6,525	1,928	1,075	142	167	14	144	6	17	-	248	50
%	100.0	100.0	16.5	7.4	2.6	0.7	2.2	0.3	0.3	-	3.8	2.6
Environmental	1,136	906	318	200	22	7	20	16	9	-	25	29
%	100.0	100.0	28.0	22.1	1.9	0.8	1.8	1.8	0.8	-	2.2	3.2
General	65,179	2,549	11,292	268	2,733	23	1,717	12	174	2	2,562	95
%	100.0	100.0	17.3	10.5	4.2	0.9	2.6	0.5	0.3	0.1	3.9	3.7
Industrial	14,983	2,469	3,785	388	807	40	931	50	19	-	313	134
%	100.0	100.0	25.3	15.7	5.4	1.6	6.2	2.0	0.1	-	2.1	5.4
Marine	2,735	410	170	20	34	3	35	1	1	-	27	9
%	100.0	100.0	6.2	4.9	1.2	0.7	1.3	0.2	*	-	1.0	2.2
Materials/Metals	3,832	2,442	801	261	81	12	98	16	6	1	79	78
%	100.0	100.0	20.9	10.7	2.1	0.5	2.6	0.7	0.2	*	2.1	3.2
Mechanical	69,608	6,189	6,548	326	3,073	49	2,104	59	152	4	2,086	267
%	100.0	100.0	9.4	5.3	4.4	0.8	3.0	1.0	0.2	0.1	3.0	4.3
Mining/Mineral	4,900	575	670	91	36	3	68	4	28	-	39	5
%	100.0	100.0	13.7	15.8	0.7	0.5	1.4	0.7	0.6	-	0.8	0.9
Nuclear	2,168	1,034	221	70	29	15	55	12	5	4	48	32
%	100.0	100.0	10.2	6.8	1.3	1.5	2.5	1.2	0.2	0.4	2.2	3.1
Petroleum	7,558	363	974	23	132	1	221	1	34	1	100	18
%	100.0	100.0	12.9	6.3	1.7	0.3	2.9	0.3	0.4	0.3	1.3	5.0
Systems	1,202	726	234	92	70	14	36	9	5	-	42	34
%	100.0	100.0	19.5	12.7	5.8	1.9	3.0	1.2	0.4	-	3.5	4.7
All Other	1,668	225	403	47	239	3	33	1	13	1	41	6
%	100.0	100.0	24.2	20.9	14.3	1.3	2.0	0.4	0.8	0.4	2.5	4.6
TOTAL	387,577	47,772	56,049	4,627	17,611	553	13,615	595	970	42	14,462	2,217
%	100.0	100.0	14.5	9.7	4.5	1.2	3.5	1.2	0.3	0.1	3.7	4.6

* Less than 0.1%

FIELD: Nuclear Engineering

SOURCE: Nuclear Engineering Enrollments and Degrees, 1976, 1979, 1980, & 1981, Energy Research & Development Administration, ERDA-77-102, July 1977, U.S. Department of Energy, ORAU-199, May 1982

TABLE 7-21

ENROLLMENTS AND DEGREES IN NUCLEAR ENGINEERING BY SEX, MINORITY GROUP AND EDUCATION LEVEL, 1972-73 - 1980-81

SEX, MINORITY GROUP & YEAR	ENROLLMENTS								DEGREES					
	Undergraduate				Graduate									
	3rd Year		4th Year		Master's		Doctorate		Bachelor's		Master's		Doctorate	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
WOMEN														
1972-73	17	2.69	23	3.45	17	1.87	9	1.37	6	0.92	2	0.44	-	-
1973-74	16	2.62	21	3.00	24	2.36	7	1.13	13	2.13	5	1.08	1	0.78
1974-75	31	4.49	27	3.76	32	2.61	14	2.33	14	2.72	11	2.32	2	1.98
1975-76	39	4.49	34	3.94	31	2.19	10	1.50	14	2.20	7	1.50	-	-
1976-77	59	6.25	43	4.53	42	3.16	20	3.43	15	1.98	13	2.35	2	1.65
1977-78	55	5.38	49	4.80	45	3.85	7	1.21	28	3.60	9	1.35	4	3.64
1978-79	61	6.79	10	0.99	55	5.17	21	3.59	36	4.83	12	2.65	1	0.85
1979-80	69	8.55	68	7.29	64	6.68	31	4.92	44	6.71	19	5.19	-	-
1980-81	65	8.75	57	7.25	55	6.35	26	4.20	46	7.17	22	6.98	6	4.58
BLACKS														
1972-73	4	0.63	7	1.05	20	2.20	4	0.61	9	1.38	7	1.55	2	1.56
1973-74	3	0.49	6	0.86	21	2.06	5	0.80	3	0.49	8	1.72	-	-
1974-75	6	0.87	3	0.42	20	1.63	7	1.16	4	0.78	5	1.05	-	-
1975-76	19	2.19	8	0.93	18	1.27	4	0.60	6	0.94	2	0.43	-	-
1976-77	8	0.85	12	1.26	14	1.05	4	0.69	1	0.15	6	1.08	1	0.83
1977-78	4	0.39	6	0.59	9	0.77	4	0.69	7	0.90	5	1.03	1	0.91
1978-79	9	1.00	10	0.99	15	1.41	5	0.85	5	0.67	-	-	1	.85
1979-80	10	1.24	9	0.96	12	1.25	8	1.27	7	1.07	4	1.09	-	-
1980-81	8	1.08	5	0.64	9	1.04	6	0.97	4	0.62	4	1.27	1	0.76
HISPANICS														
1972-73	7	1.11	12	1.80	6*	0.66	1	0.15	5	0.77	-	-	1	0.78
1973-74	4	0.66	3	0.43	3*	0.29	4	0.64	3	0.49	2*	0.43	2	1.56
1974-75	3	0.43	7	0.97	3*	0.25	3	0.50	3	0.58	6*	1.26	1	0.99
1975-76	8	0.92	7	0.81	21*	1.48	2	0.30	4	0.63	10*	2.14	-	-
1976-77	7	0.74	5	0.53	10*	0.75	2	0.34	1	0.13	3*	0.54	1	0.83
1977-78	12	1.18	8	0.78	11	0.94	2	0.35	4	0.51	4	0.82	-	-
1978-79	6	0.67	9	0.89	11	1.03	1*	0.17	10	1.34	2	0.44	1	0.85
1979-80	10	1.24	12	1.29	11	1.15	3	0.48	6	0.91	4	1.09	-	-
1980-81	14	1.88	14	1.78	10	1.15	10	1.62	8	1.25	8	2.53	-	-
ASIAN AMERICANS														
1972-73	2	0.32	6	0.90	9	0.99	11	1.67	3	0.46	4	0.88	3	2.34
1973-74	7	1.15	2	0.29	9	0.88	7	1.13	2	0.33	5	1.08	-	-
1974-75	2	0.29	4	0.56	17	1.39	5	0.83	1	0.19	7	1.47	2	1.98
1975-76	4	0.46	5	0.58	25	1.77	5	0.75	4	0.63	2	0.43	3	2.07
1976-77	7	0.74	4	0.42	15	1.13	14	2.40	3	0.40	7	1.26	2	1.65
1977-78	5	0.49	10	0.98	21	1.80	13	2.25	3	0.39	4	0.82	2	1.82
1978-79	7	0.78	12	1.19	26	2.44	17	2.91	7	0.94	13	2.87	6	5.13
1979-80	9	1.12	8	0.86	21	2.19	17	2.70	6	0.91	11	3.00	3	2.59
1980-81	8	1.08	12	1.53	18	2.08	14	2.26	8	1.25	5	1.59	3	2.29
AMERICAN INDIANS														
1975-76	-	-	-	-	1	0.07	-	-	-	-	1	0.21	-	-
1976-77	-	-	1	0.11	1	0.08	1	0.17	-	-	-	-	-	-
1977-78	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1978-79	-	-	-	-	-	-	-	-	-	-	1	0.22	-	-
1979-80	2	0.25	1	0.11	1	1.04	-	-	-	-	-	-	-	-
1980-81	1	0.13	1	0.13	1	0.12	1	2.26	-	-	-	-	-	-
TOTAL														
1972-73	633		667		911		659		663		452		128	
1973-74	610		700		1,018		622		628		465		128	
1974-75	691		719		1,224		602		529		475		101	
1975-76	869		864		1,414		665		648		468		145	
1976-77	944		949		1,329		583		758		554		121	
1977-78	1,022		1,020		1,168		577		777		487		110	
1978-79	898		1,010		1,064		585		746		453		117	
1979-80	807		933		958		630		656		366		116	
1980-81	743		786		866		619		642		315		131	

* These figures do not include students of the University of Puerto Rico.

FIELD: Radiation Protection

SOURCE: Radiation Protection Enrollments and Degrees, 1979,1980, and 1981, U.S. Department of Energy, ORAU-198, May 1982

TABLE 7-22

ENROLLMENTS AND DEGREES IN RADIATION PROTECTION BY SEX, MINORITY GROUP AND EDUCATION LEVEL, 1973-1981

SEX, MINORITY GROUP & YEAR	ENROLLMENTS (FALL TERM)								DEGREES (YR. ENDING JUNE 30)					
	Undergraduate				Graduate									
	Junior		Senior		Master's		Doctorate		Bachelor's		Master's		Doctorate	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
WOMEN														
1973	24	21.82	8	8.42	24	7.82	23	6.55	5	5.15	9	4.97	3	3.95
1974	5	4.38	14	11.57	41	13.31	21	6.12	7	5.98	9	5.03	4	5.97
1975	42	19.63	27	13.11	49	11.92	22	6.32	15	9.43	12	6.90	5	6.49
1976	34	20.24	23	17.83	70	17.54	116	30.69	12	10.43	18	10.53	11	19.30
1977	70	28.69	45	22.73	68	16.71	36	10.94	22	16.54	19	12.84	4	5.97
1978	17	9.50	35	9.66	62	14.49	22	6.40	26	17.22	18	12.33	5	7.94
1979	31	19.25	41	26.45	71	16.86	54	17.70	44	32.35	29	21.01	9	14.29
1980	89	34.63	47	30.52	94	22.01	60	18.93	41	30.15	28	16.09	9	18.00
1981	62	36.05	56	36.13	125	28.03	51	16.78	28	22.40	40	23.81	9	14.75
BLACKS														
1973	18	16.36	3	3.16	4	1.30	2	0.57	-	-	1	0.55	2	2.63
1974	-	-	1	0.83	2	0.65	-	-	-	-	1	0.56	1	1.49
1975	18	8.41	17	8.25	1	0.24	-	-	-	-	2	1.15	1	1.30
1976	8	4.76	2	1.55	5	1.25	4	1.06	3	2.61	2	1.17	-	-
1977	21	8.61	17	8.59	5	1.23	3	0.91	9	6.77	1	0.68	-	-
1978	13	7.26	13	7.30	3	0.70	4	1.16	13	8.61	4	2.74	2	3.17
1979	10	6.21	9	5.81	7	1.66	5	1.64	9	6.62	2	1.45	1	1.59
1980	21	8.17	9	5.84	9	2.11	2	0.63	7	5.15	1	0.57	-	-
1981	11	6.40	11	7.10	7	1.57	3	0.99	6	4.80	1	0.60	-	-
HISPANICS														
1973	6	5.45	1	1.05	5	1.63	2	0.57	-	-	-	-	1	1.32
1974	-	-	-	-	8	2.60	2	0.58	1	0.85	4	2.27	1	1.49
1975	5	2.34	4	1.94	5	1.22	2	0.57	-	-	1	0.57	-	-
1976	-	-	2	1.55	4	1.00	4	1.06	-	-	1	0.58	2	3.51
1977	11	4.51	2	1.01	2	0.49	4	1.22	2	1.50	1	0.68	1	1.49
1978	5	2.79	6	3.37	2	0.47	4	1.16	3	1.99	1	0.68	-	-
1979	9	5.59	2	1.29	6	1.43	5	1.64	4	2.94	-	-	-	-
1980	12	4.67	7	4.55	7	1.64	3	0.95	2	1.47	3	1.72	1	2.00
1981	8	4.65	8	5.16	8	1.79	2	0.66	3	2.40	1	0.60	2	3.28
ASIAN AMERICANS														
1973	-	-	4	4.21	7	2.28	4	1.14	[illegible]	[illegible]	4	2.21	2	2.63
1974	-	-	-	-	3	0.97	2	0.58	[illegible]	-	2	1.12	-	-
1975	9	4.21	3	1.46	2	0.49	3	0.86	3	1.89	6	3.45	2	2.60
1976	13	7.74	8	6.20	5	1.25	14	3.70	1	0.87	1	0.58	2	3.51
1977	4	1.64	3	1.52	4	0.98	6	1.82	3	2.26	-	-	1	1.49
1978	2	1.18	-	-	11	2.57	10	2.91	1	0.66	-	-	-	-
1979	-	-	3	1.94	5	1.19	11	3.61	1	0.74	4	2.90	-	-
1980	19	7.39	15	9.74	3	0.70	16	5.05	-	-	2	1.15	1	2.00
1981	15	8.72	11	7.10	5	1.12	14	4.67	7	5.60	5	2.98	1	1.64
TOTAL														
1973	110	100.0	95	100.00	307	100.00	351	100.00	97	100.00	181	100.00	76	100.00
1974	114	100.00	121	100.00	308	100.00	343	100.00	117	100.00	179	100.00	67	100.00
1975	214	100.00	206	100.00	411	100.00	348	100.00	159	100.00	174	100.00	77	100.00
1976	168	100.00	129	100.00	399	100.00	378	100.00	115	100.00	171	100.00	57	100.00
1977	244	100.00	198	100.00	407	100.00	329	100.00	133	100.00	148	100.00	57	100.00
1978	179	100.00	178	100.00	428	100.00	344	100.00	151	100.00	146	100.00	63	100.00
1979	161	100.00	155	100.00	421	100.00	305	100.00	136	100.00	138	100.00	63	100.00
1980	257	100.00	154	100.00	427	100.00	317	100.00	136	100.00	174	100.00	50	100.00
1981	172	100.00	155	100.00	446	100.00	304	100.00	125	100.00	168	100.00	61	100.00

FIELD: Engineering
SOURCE: 1980 Census, Special EEO File, Bureau of the Census

TABLE 7-23

Engineers by Subfield, Sex and Race/Ethnicity, 1980

Occupations	All Persons	Males							Females						
		Total Males	Males Not of Spanish Origin					Males of Spanish Origin	Total Females	Females Not of Spanish Origin					Females of Spanish Origin
			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.	
	1445042	1388801	1252362	29420	3023	59967	1734	30304	56241	44494	4527	225	2674	98	1564
Engineers	100.00%	96.11%	86.66%	2.04%	0.21%	4.15%	0.12%	2.10%	3.89%	3.08%	0.31%	0.02%	0.19%	0.01%	0.11%
	88491	85622	77557	1476	221	4107	74	2187	2869	2394	221	0	173	0	81
Aerospace	100.00%	96.76%	87.64%	1.67%	0.25%	4.64%	0.08%	2.47%	3.24%	2.71%	0.25%	0.00%	0.20%	0.00%	0.09%
	4505	4115	3845	62	4	122	0	82	390	353	23	7	7	0	0
Agricultural	100.00%	91.34%	85.35%	1.38%	0.09%	2.71%	0.00%	1.82%	8.66%	7.84%	0.51%	0.16%	0.16%	0.00%	0.00%
	57502	54487	49349	947	70	3075	70	976	3015	2490	205	8	186	16	110
Chemical	100.00%	94.76%	85.82%	1.65%	0.12%	5.35%	0.12%	1.70%	5.24%	4.33%	0.36%	0.01%	0.32%	0.03%	0.19%
	204035	198029	174802	4692	544	12206	378	5407	6006	5081	358	24	352	22	159
Civil	100.00%	97.06%	85.67%	2.30%	0.27%	5.98%	0.19%	2.65%	2.94%	2.49%	0.18%	0.01%	0.17%	0.01%	0.08%
	322874	306695	276662	7977	715	13830	324	7187	16179	13344	1442	14	681	19	679
Electrical/Electronic	100.00%	94.99%	85.69%	2.47%	0.22%	4.28%	0.10%	2.23%	5.01%	4.13%	0.45%	0.00%	0.21%	0.01%	0.21%
	194322	174968	163026	4494	342	3432	199	3475	19354	17079	1116	94	398	30	639
Industrial	100.00%	90.04%	83.89%	2.31%	0.18%	1.77%	0.10%	1.79%	9.96%	8.79%	0.57%	0.05%	0.20%	0.02%	0.33%
	18882	16367	15011	343	49	393	16	555	315	278	19	6	9	0	3
Marine/Naval Architects	100.00%	98.11%	89.98%	2.06%	0.29%	2.36%	0.10%	3.33%	1.89%	1.67%	0.11%	0.04%	0.05%	0.00%	0.02%
	24539	23280	21397	483	19	893	49	439	1279	1095	80	21	41	0	42
Metallurgical/Materials	100.00%	94.79%	87.20%	1.89%	0.08%	3.64%	0.20%	1.79%	5.21%	4.46%	0.33%	0.09%	0.17%	0.00%	0.17%
	197850	193579	177807	4354	360	7457	241	3360	4071	3472	304	20	182	5	88
Mechanical	100.00%	97.84%	89.86%	2.20%	0.18%	3.77%	0.12%	1.70%	2.06%	1.76%	0.15%	0.01%	0.09%	0.00%	0.04%
	10041	9700	9078	100	61	194	0	267	341	301	0	7	5	0	28
Mining	100.00%	96.60%	90.41%	1.00%	0.61%	1.93%	0.00%	2.66%	3.40%	3.00%	0.00%	0.07%	0.05%	0.00%	0.28%
	9248	8897	7949	128	22	597	20	181	343	298	10	0	18	0	17
Nuclear	100.00%	96.29%	86.03%	1.39%	0.24%	6.46%	0.22%	1.96%	3.71%	3.23%	0.11%	0.00%	0.19%	0.00%	0.18%
	23054	22235	20883	315	98	475	47	419	819	719	31	6	35	0	28
Petroleum	100.00%	96.45%	90.58%	1.37%	0.42%	2.06%	0.20%	1.82%	3.55%	3.12%	0.13%	0.03%	0.15%	0.00%	0.12%
	44069	42648	41407	335	23	399	12	470	1423	1279	52	7	11	0	74
Sales	100.00%	96.77%	93.96%	0.76%	0.05%	0.91%	0.03%	1.07%	3.23%	2.90%	0.12%	0.02%	0.02%	0.00%	0.17%
	248038	238210	213589	5734	497	12787	304	5299	9828	8321	656	12	578	8	255
Engineers, Misc.	100.00%	96.04%	86.11%	2.31%	0.20%	5.16%	0.12%	2.14%	3.96%	3.35%	0.26%	0.00%	0.23%	0.00%	0.10%

FIELD: Engineering and Architecture

SOURCE: Federal Civilian Workforce Statistics, Equal Employment Opportunity Statistics, U.S. Office of Personnel Management, AR-80-71, Nov. 1980

TABLE 7-24

NUMBER AND PERCENT OF FEDERAL WORKERS EMPLOYED IN ENGINEERING AND ARCHITECTURE BY OCCUPATIONAL TITLE, SEX AND MINORITY STATUS, NOVEMBER 1980

OCCUPATIONAL TITLE	ALL EMPLOYEES			TOTAL MINORITY				BLACK		HISPANIC		AM. INDIAN		ASIAN		ALL OTHERS	
	Total	Women	% W	Total	%	Women	% W	No.	% B	No.	% H	No.	% I	No.	% A	No.	% O
General Engineering	16,780	212	1.3	1,094	6.5	27	0.2	388	2.3	317	1.9	71	0.4	318	1.9	15,686	93.5
Safety Engineering	654	17	2.6	36	5.5	2	0.3	15	2.3	11	1.7	1	0.2	9	1.4	618	94.5
Fire Preven. Engineering	116	0	0.0	8	6.9	0	0.0	2	1.7	1	0.9	1	0.9	4	3.4	108	93.1
Materials Engineering	919	34	3.7	60	6.5	1	0.1	29	3.2	8	0.9	2	0.2	21	2.3	859	93.5
Landscape Architecture	631	55	8.7	19	3.0	3	0.5	3	0.5	3	0.5	4	0.6	9	1.4	612	97.0
Architecture	1,611	100	6.2	274	17.0	17	1.1	149	9.2	47	2.9	10	0.6	68	4.2	1,337	83.0
Civil Engineering	15,468	325	2.1	1,376	8.9	53	0.3	294	1.9	454	2.9	101	0.7	527	3.4	14,092	91.1
Enviro mental Engineering	1,887	136	7.2	191	10.1	21	1.1	43	2.3	51	2.7	6	0.3	91	4.8	1,696	89.9
Mechanical Engineering	9,955	132	1.3	766	7.7	13	0.1	234	2.4	151	1.5	17	0.2	364	3.7	9,189	92.3
Nuclear Engineering	2,259	32	1.4	114	5.0	2	0.1	31	1.4	20	0.9	1	*	62	2.7	2,145	95.0
Electrical Engineering	4,417	82	1.9	397	9.0	12	0.3	148	3.4	72	1.6	10	0.2	167	3.8	4,020	91.0
Electronics Engineering	19,430	265	1.4	1,494	7.7	45	0.2	567	2.9	380	2.0	26	0.1	521	2.7	17,396	92.3
Biomedical Engineering	184	14	7.6	10	5.4	4	2.2	2	1.1	3	1.6	0	0.0	5	2.7	174	94.6
Aerospace Engineering	7,855	158	2.0	439	5.6	24	0.3	139	1.8	132	1.7	10	0.1	158	2.0	7,416	94.4
Naval Architecture	1,025	27	2.6	108	10.5	5	0.5	44	4.3	16	1.6	1	0.1	47	4.6	917	89.5
Mining Engineering	508	8	1.6	26	5.1	0	0.0	1	0.2	6	1.2	4	0.8	15	3.0	482	94.9
Petroleum Engineering	441	8	1.8	32	7.3	1	0.2	7	1.6	11	2.5	3	0.7	11	2.5	409	92.7
Agricultural Engineering	437	3	0.7	20	4.6	0	0.0	1	0.2	5	1.1	7	1.6	7	1.6	417	95.4
Ceramic Engineering	46	1	2.2	3	6.5	0	0.0	0	0.0	1	2.2	0	0.0	2	4.3	43	93.5
Chemical Engineering	1,476	63	4.3	141	9.6	18	1.2	25	1.7	33	2.2	1	0.1	82	5.6	1,335	90.4
Welding Engineering	88	2	2.3	2	2.3	0	0.0	0	0.0	0	0.0	0	0.0	2	2.3	86	97.7
Industrial Engineering	2,492	37	1.5	161	6.5	5	0.2	41	1.6	59	2.4	7	0.3	54	2.2	2,331	93.5
TOTAL	88,679	1,711	1.9	6,771	7.6	254	0.3	2,163	2.4	1,781	2.0	283	0.3	2,544	2.9	81,368	91.8

* Less than 0.05

FIELD: Engineering Technology

SOURCE: Engineering and Technology Degrees Series 1969 - 1982, Engineering Manpower Commission

TABLE 7-25

WOMEN AND MINORITY ENGINEERING TECHNOLOGY GRADUATES, BY LEVEL

	Engineering Technology				Industrial Technology			
	Associate		Bachelor's		Associate		Bachelor's	
	No.	%	No.	%	No.	%	No.	%
TOTAL								
1972-73	18,316	100.0	4,402	100.0	6,481	100.0	2,076	100.0
1973-74	17,537	100.0	4,830	100.0	7,389	100.0	1,613	100.0
1974-75	16,978	100.0	5,867	100.0	5,816	100.0	2,042	100.0
1975-76	16,685	100.0	5,721	100.0	6,362	100.0	1,358	100.0
1976-77	15,123	100.0	6,337	100.0	5,346	100.0	1,345	100.0
1977-78	16,099	100.0	7,164	100.0	6,660	100.0	2,202	100.0
1978-79	14,622	100.0	6,609	100.0	5,306	100.0	2,105	100.0
1979-80	15,817	100.0	7,567	100.0	5,937	100.0	2,481	100.0
1980-81	17,975	100.0	8,469	100.0	7,340	100.0	3,188	100.0
1981-82	17,198	100.0	8,325	100.0	6,514	100.0	3,110	100.0
WOMEN								
1972-73	436	2.4	42	1.0	278	4.3	28	1.3
1973-74	581	3.3	29	0.6	246	3.3	11	0.7
1974-75	502	3.0	60	1.0	316	5.4	25	1.2
1975-76	780	4.7	24	0.4	433	6.8	24	1.8
1976-77	825	5.5	147	2.3	347	6.5	46	3.4
1977-78	947	5.9	191	2.7	605	9.1	120	5.5
1978-79	1,060	7.2	246	3.7	516	9.7	120	5.7
1979-80	1,219	7.7	299	4.0	633	10.7	238	9.6
1980-81	1,637	9.1	387	4.6	933	12.7	331	10.4
1981-82	1,656	9.6	333	4.0	710	10.9	259	8.3
BLACK								
1972-73	583	3.2	151	3.4	165	2.5	85	4.1
1973-74	536	3.0	226	4.7	227	3.1	66	4.1
1974-75	598	3.5	228	3.9	215	3.7	80	3.9
1975-76	793	4.8	254	4.4	339	5.3	111	8.2
1976-77	594	3.9	256	4.0	131	2.5	87	6.5
1977-78	739	4.6	295	4.1	510	7.7	114	5.2
1978-79	538	3.7	310	4.7	275	5.2	180	8.6
1979-80	848	5.4	382	5.0	318	5.3	88	3.5
1980-81	924	5.1	296	3.5	362	4.9	244	7.7
1981-82	663	3.9	292	3.5	336	5.2	85	2.7
HISPANIC								
1972-73	486	2.7	41	0.9	76	1.8	6	0.3
1973-74	323	1.8	95	2.0	175	2.4	22	1.4
1974-75	345	2.0	137	2.3	148	2.5	36	1.7
1975-76	536	3.2	112	2.0	261	4.1	17	1.2
1976-77	350	2.3	122	1.9	180	3.4	26	1.9
1977-78	371	2.3	125	1.7	210	3.2	19	0.9
1978-79	445	3.0	144	2.2	254	4.8	28	1.3
1979-80	600	3.8	150	2.0	217	3.7	22	0.9
1980-81	528	2.9	171	2.0	283	3.9	74	2.3
1981-82	283	1.6	220	2.6	160	2.5	47	1.5
ASIAN								
1972-73	74	0.4	52	1.2	18	0.3	2	0.1
1973-74	137	0.8	89	1.8	29	0.3	16	1.0
1974-75	146	0.9	92	1.6	30	0.5	14	0.7
1975-76	183	1.1	74	1.3	113	1.8	5	0.4
1976-77	144	1.0	93	1.5	31	0.6	36	2.7
1977-78	194	1.2	114	1.6	91	1.4	10	0.5
1978-79	197	1.3	211	3.2	49	0.9	14	0.7
1979-80	219	1.4	145	1.9	58	1.0	17	0.7
1980-81	256	1.4	258	3.0	108	1.5	17	0.5
1981-82	286	1.7	199	2.4	101	1.6	24	0.8
AMERICAN INDIAN								
1972-73	76	0.4	3	0.1	9	0.1	6	0.3
1973-74	47	0.3	10	0.2	91	1.2	1	0.1
1974-75	71	0.4	8	0.1	79	1.3	2	0.1
1975-76	28	0.2	11	0.2	19	0.3	3	0.2
1976-77	25	0.2	9	0.1	6	0.1	6	0.4
1977-78	85	0.5	12	0.2	23	0.3	2	0.1
1978-79	28	0.2	11	0.2	39	0.7	11	0.5
1979-80	20	0.1	8	0.1	11	0.2	10	0.4
1980-81	37	0.2	14	0.2	78	1.0	3	0.1
1981-82	46	0.3	18	0.2	30	0.5	33	1.1

FIELD: Engineering Technology

SOURCE: Engineering and Technology Degrees, 1977, 1978, 1979, 1980, 1981 and 1982, Engineering Manpower Commission

TABLE 7-26

BACHELOR'S DEGREES AWARDED IN ENGINEERING TECHNOLOGY AND INDUSTRIAL TECHNOLOGY BY CURRICULUM, SEX AND MINORITY GROUP, 1977-1982

CURRICULUM	TOTAL				WOMEN				BLACK				HISPANIC				ASIAN/PAC.				AM. INDIAN			
	1977-1981		1982		1977-1981		1982		1977-1981		1982		1977-1981		1982		1977-81		1982		1977-1981		1982	
	Eng.	Ind.	Eng.	Ind.	Eng.	Ind.	Eng.	Ind.	Eng.	Ind.	Eng.	I.	E.	I.	E.	I.	E.	I.	E.	I.	E.	I.	E.	I.
Aeronautical	614	271	46	182	6	19	0	15	14	15	0	2	5	1	1	1	15	2	0	1	2	0	2	1
Air Conditioning	186	25	0	0	2	0	0	0	7	0	0	0	5	10	0	0	3	4	0	0	0	0	1	0
Architectural	804	141	172	26	44	17	16	2	42	9	6	2	11	12	2	7	13	2	1	1	0	0	0	0
Automotive	216	445	15	286	0	4	0	2	14	21	1	0	3	45	0	1	7	0	0	1	0	0	0	0
Chemical	78	2	17	0	14	0	3	0	2	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
Civil	3,388	10	664	6	132	13	35	0	114	0	23	0	89	0	24	0	187	0	13	0	7	0	0	0
Computer	630	106	118	129	137	16	28	31	159	9	30	6	0	5	3	1	28	2	5	6	0	0	0	0
Construction	2,195	566	534	309	59	7	28	15	86	56	25	6	44	8	27	2	28	1	11	0	7	0	2	1
Drafting/Design	502	306	135	135	43	56	14	30	45	53	5	11	10	2	2	1	7	0	4	0	4	0	0	0
Electrical	5,496	100	1,362	117	82	3	40	4	206	7	28	3	50	7	41	3	88	1	31	1	3	0	1	0
Electromechanical	532	6	166	16	13	1	2	0	31	0	20	0	16	0	7	0	13	1	5	0	2	0	0	0
Electronic	7,661	579	1,873	109	120	10	41	6	424	161	70	8	167	9	38	0	219	1	48	1	11	1	3	0
Engineering Sci.	557	11	2	0	9	0	1	0	10	1	0	0	5	0	0	0	2	0	0	0	0	0	0	0
General	2,743	14	657	1,021	120	0	21	94	55	3	9	31	141	0	23	29	50	0	42	10	4	0	3	30
Industrial	2,677	7,805	462	617	226	632	23	44	79	460	10	12	33	74	10	1	19	75	3	2	1	28	1	0
Marine	189	246	123	0	4	10	2	0	3	1	1	0	1	5	2	0	9	1	3	0	0	0	0	0
Materials/Metals	209	40	147	0	8	0	6	0	0	0	3	0	5	5	8	0	5	1	4	0	0	0	1	0
Mechanical	6,007	127	1,563	73	137	6	52	3	191	8	59	2	85	1	28	1	124	0	28	1	9	0	2	1
Mineral/Mining	357	53	0	1	8	3	0	0	4	0	0	0	4	3	0	0	1	0	0	0	0	0	0	0
Nuclear	77	0	2	0	10	2	2	0	1	0	0	0	1	0	0	0	2	0	0	0	0	0	0	0
Other	1,144	407	267	83	95	55	19	13	40	33	1	2	35	14	4	0	4	0	1	0	2	0	2	0
TOTAL	36,128	11,321	8,325	3,110	1,270	855	333	259	1,485	713	292	85	712	198	220	47	821	94	199	24	54	29	18	33

FIELD: Engineering Technology

SOURCE: Engineering and Technology Degrees, 1977, 1978, 1979, 1980, 1981 and 1982, Engineering Manpower Commission

TABLE 7-27

ASSOCIATE DEGREES AWARDED IN ENGINEERING TECHNOLOGY AND INDUSTRIAL TECHNOLOGY BY CURRICULUM, SEX AND MINORITY GROUP, 1977-1982

CURRICULUM	TOTAL				WOMEN				BLACKS				HISPANIC				ASIAN/PACIFIC				AM. INDIAN			
	1977-1981		1982		1977-1981		1982		1977-1981		1982		1977-1981		1982		1977-81		1982		1977-1981		1982	
	Eng.	Ind.	Eng.	Ind.	Eng.	Ind.	Eng.	Ind.	Eng.	Ind.	Eng.	Ind.	Eng.	Ind.	Eng.	Ind.	Eng.	Ind.	Eng.	I.	E.	I.	E.	I
Aeronautical	1,903	1,487	317	439	54	46	9	10	123	82	40	13	115	108	21	18	64	28	10	0	3	4	0	0
Air Conditioning	1,277	1,298	267	178	22	13	5	3	71	54	15	10	49	116	2	5	9	8	1	1	29	5	2	0
Architectural	4,143	1,334	814	269	542	187	163	44	171	45	34	15	70	34	7	4	21	10	10	2	7	2	3	0
Automotive	1,762	3,068	245	623	19	33	1	23	52	151	4	45	23	98	2	23	6	57	1	7	3	37	2	10
Chemical	1,379	204	246	27	469	85	104	11	115	16	17	8	14	1	3	3	26	4	6	1	0	1	0	0
Civil	6,268	747	1,257	70	430	51	113	1	184	31	47	11	142	7	21	0	66	2	12	1	11	15	5	6
Computer	4,833	3,168	1,052	787	1,175	1,173	379	335	435	255	39	22	147	131	15	8	25	47	27	20	10	13	3	1
Construction	2,518	1,430	424	293	100	49	16	10	71	104	11	22	40	90	2	4	10	9	0	2	5	15	1	2
Drafting/Design	3,156	2,999	671	617	423	505	112	99	188	176	29	36	132	225	4	47	66	33	3	34	16	5	8	1
Electrical	9,916	1,676	2,348	300	253	25	92	9	317	31	77	15	131	28	21	0	36	13	19	1	15	7	2	3
Electromechanical	1,947	749	382	95	64	22	23	7	103	22	31	1	92	16	9	0	61	12	13	0	14	0	0	0
Electronic	17,476	5,785	4,252	1,469	585	211	213	67	1,020	316	176	66	538	128	106	23	125	88	133	19	39	20	10	2
Engineering Sci.	6,387	2,063	1,047	0	392	1	112	0	167	0	19	0	527	3	18	0	201	1	18	0	18	0	5	0
General	739	47	141	245	49	1	19	16	24	2	1	17	24	0	0	2	82	0	5	6	4	0	1	0
Industrial	2,546	657	575	148	277	108	67	26	163	130	18	6	55	47	1	4	12	10	4	0	1	6	1	3
Marine	1	57	9	148	0	8	0	0	0	0	0	0	0	7	0	0	12	1	0	0	0	0	0	0
Materials/Metals	175	301	261	0	11	9	13	0	0	19	3	0	5	21	2	0	3	1	0	0	0	0	0	0
Mechanical	9,690	1,339	2,554	397	556	40	171	11	294	84	90	29	137	12	49	5	78	5	23	3	18	19	3	2
Mineral/Mining	781	156	0	107	33	6	0	2	9	4	0	4	3	0	0	10	1	0	0	0	0	0	0	0
Nuclear	216	52	9	0	27	4	1	0	10	1	0	0	1	3	0	0	0	0	0	0	0	0	0	0
Other	1,677	1,918	327	302	193	457	43	36	110	70	12	16	47	58	0	4	17	7	1	4	2	8	0	0
TOTAL	79,636	30,589	17,198	6,514	5,688	3,034	1,656	710	3,643	1,596	663	336	2,294	1,144	283	160	1,010	337	286	101	195	157	46	30

FIELD: Engineering Technology

SOURCE: Engineering and Technology Enrollments Series 1972-1981, Engineering Manpower Commission.

TABLE 7-28

ENGINEERING TECHNOLOGY ENROLLMENTS OF WOMEN AND MINORITIES*

	ASSOCIATE DEGREE & PRE-ENGINEERING PROGRAMS					BACHELOR OF TECHNOLOGY PROGRAMS						
				Total						Total		All
	1st Year	2nd Year	Other Years	Full Time	Part Time	1st Year	2nd Year	3rd Year	4th Year	Full Time	Part Time	Post Bacc.
ALL STUDENTS												
Fall 1972	69,179	38,686	1,529	109,394	35,857	4,345	4,145	7,276	7,229	22,995	4,683	594
Fall 1973	68,024	37,754	1,555	107,333	40,144	4,869	3,946	6,367	6,334	21,516	4,097	251
Fall 1974	61,372	32,517	10,633	104,522	42,833	4,506	3,398	6,353	5,737	19,994	4,848	198
Fall 1976	55,792	31,771	1,901	89,464	36,460	7,134	5,764	8,467	7,770	29,135	6,543	483
Fall 1977	56,171	31,874	1,056	89,101	82,906	9,506	7,310	10,417	10,169	37,402	9,571	489
Fall 1978	44,934	24,035	733	69,702	34,589	8,420	6,816	9,881	9,911	35,028	8,400	482
Fall 1979	47,517	24,988	816	73,321	41,284	8,680	6,547	9,902	9,842	34,971	9,982	294
Fall 1980	67,971	35,434	1,188	104,593	54,549	10,998	8,543	12,271	12,132	43,944	12,767	556
Fall 1981	55,202	32,461	872	88,535	45,299	10,691	8,313	13,339	13,020	45,363	11,409	546
WOMEN												
Fall 1972	1,536	648	11	2,657	953	75	72	119	70	343	67	0
Fall 1973	2,315	1,143	118	4,240	1,932	138	95	147	75	490	146	11
Fall 1974	2,745	1,207	545	4,768	3,055	189	131	151	142	630	189	14
Fall 1976	3,819	2,117	68	6,004	3,225	426	426	365	245	1,162	301	55
Fall 1977	4,877	2,499	54	7,430	2,411	587	464	549	354	1,954	287	29
Fall 1978	4,333	1,918	38	6,359	2,500	681	564	629	502	2,376	533	40
Fall 1979	5,621	2,428	180	8,229	4,923	800	533	595	447	2,375	508	82
Fall 1980	8,754	3,795	371	12,920	7,594	1,085	837	947	834	3,703	776	60
Fall 1981	7,838	3,970	68	11,876	8,059	1,360	978	1,158	1,067	4,563	766	62
BLACKS												
Fall 1972	2,052	1,152	10	3,864	1,058	260	149	238	212	1,135	88	13
Fall 1973	2,569	1,316	41	5,045	1,264	295	216	295	261	1,381	177	12
Fall 1974	2,723	1,132	1,472	5,815	2,406	260	196	249	199	1,048	158	0
Fall 1976	3,917	2,164	159	6,240	3,186	646	536	511	409	2,102	386	52
Fall 1977	4,347	1,794	78	6,219	2,201	968	776	875	615	3,234	320	55
Fall 1978	3,892	1,570	33	5,495	2,170	644	538	675	608	2,465	353	23
Fall 1979	4,101	1,601	48	5,750	2,726	660	473	537	447	2,117	323	8
Fall 1980	5,888	2,191	60	8,139	3,762	1,071	752	896	716	3,435	552	20
Fall 1981	4,519	1,823	67	6,409	3,860	1,209	886	978	905	3,978	538	39
HISPANICS												
Fall 1973	1,321	731	28	2,364	792	79	30	53	39	341		
Fall 1974	1,478	670	316	2,572	1,379	65	34	143	116	421	138	0
Fall 1976	2,290	1,418	67	3,775	1,667	238	185	215	173	811	255	8
Fall 1977	2,908	1,404	6	4,318	1,414	262	212	304	236	1,014	105	22
Fall 1978	2,004	866	9	2,879	1,318	182	150	343	289	964	234	6
Fall 1979	1,214	502	29	1,745	857	184	137	243	228	792	267	5
Fall 1980	2,586	1,236	51	3,873	1,291	151	146	280	228	805	332	15
Fall 1981	1,668	797	8	2,473	1,064	213	146	270	268	897	465	5
AMERICAN INDIAN												
Fall 1973	213	92	0	490	67	8	7	13	18	71	10	0
Fall 1974	352	279	30	673	143	9	7	25	23	65	14	0
Fall 1976	576	238	11	825	157	49	31	31	22	133	6	0
Fall 1977	408	175	2	585	137	42	24	35	39	140	4	0
Fall 1978	342	141	0	483	138	45	35	36	34	150	2	0
Fall 1979	335	133	5	473	124	32	24	39	36	131	18	0
Fall 1980	412	151	5	568	160	48	27	33	42	150	13	0
Fall 1981	420	174	3	597	152	42	16	23	31	112	39	1
ASIAN/ PACIFIC												
Fall 1973	199	136	2	459	118	22	13	39	41	200	50	0
Fall 1974	303	190	98	645	232	32	23	59	52	170	62	0
Fall 1976	685	335	33	1,053	395	84	64	80	64	292	68	3
Fall 1977	736	373	6	1,115	528	82	48	129	92	351	36	9
Fall 1978	791	364	6	1,161	449	97	71	126	108	402	29	6
Fall 1979	718	349	18	1,085	298	151	104	214	175	644	111	5
Fall 1980	981	543	35	1,559	541	127	94	228	232	681	110	20
Fall 1981	1,015	557	34	1,606	660	192	130	182	285	789	216	6

*Totals for women and minority groups include only numbers actually reported. The totals would be higher if all institutions had reported all categories.

SOURCE: Digest of Education Statistics, 1982, National Center for Education Statistics

TABLE 7-29

ASSOCIATE DEGREES AND OTHER AWARDS BASED ON OCCUPATIONAL CURRICULUM BY LENGTH AND TYPE OF CURRICULUM AND SEX, 1979-80

Curriculum	All awards			Awards based on organized occupational curriculums of—					
				At least 2 years but less than 4 years			At least 1 year but less than 2 years		
	Total	Men	Women	Total	Men	Women	Total	Men	Women
1	2	3	4	5	6	7	8	9	10
Occupational curriculums, total	**353,333**	**158,647**	**194,686**	**278,555**	**127,191**	**151,364**	**74,778**	**31,456**	**43,322**
Science and engineering-related curriculums	193,532	96,510	97,022	144,703	70,948	73,755	48,829	25,562	23,267
Data processing technologies	15,147	7,525	7,622	12,560	6,616	5,944	2,587	909	1,678
Data processing, general	7,133	3,616	3,517	6,489	3,363	3,126	644	253	391
Key punch operator and other input preparation	888	190	698	196	37	159	692	153	539
Computer programmer	5,264	2,711	2,553	4,720	2,436	2,264	544	275	269
Computer operator and peripheral equipment operator	1,160	454	706	515	248	267	645	206	439
Data processing equipment maintenance	561	483	78	505	463	42	56	20	36
All other data processing technologies	141	71	70	135	69	66	6	2	4
Health services and paramedical technologies	86,647	10,322	76,325	66,452	8,222	58,230	20,195	2,100	18,095
Health services assistant, general	3,621	1,666	1,955	2,036	766	1,270	1,585	900	685
Dental assistant	3,317	45	3,272	1,246	26	1,220	2,071	19	2,052
Dental hygiene	4,054	103	3,951	3,964	102	3,862	90	1	89
Dental laboratory	911	521	390	852	484	368	59	37	22
Medical or biological laboratory assistant	3,672	593	3,079	3,438	564	2,874	234	29	205
Animal laboratory assistant	1,286	97	1,189	1,245	90	1,155	41	7	34
Radiologic	3,682	1,020	2,662	3,598	1,006	2,592	84	14	70
Nursing, R.N.	35,718	2,319	33,399	35,534	2,313	33,221	184	6	178
Nurse, practical	13,829	531	13,298	2,883	173	2,710	10,946	358	10,588
Occupational therapy	866	86	780	814	84	730	52	2	50
Surgical	1,128	128	1,000	257	48	209	871	80	791
Optical	783	349	434	713	326	387	70	23	47
Medical record	1,131	31	1,100	943	29	914	188	2	186
Medical assistant and medical office assistant	4,334	212	4,122	2,142	118	2,024	2,192	94	2,098
Inhalation therapy	3,201	1,094	2,107	2,371	877	1,494	830	217	613
Psychiatric	2,049	403	1,646	1,810	335	1,475	239	68	171
Electro diagnostic	155	47	108	123	41	82	32	6	26
Institutional management	278	84	194	241	67	174	37	17	20
Physical therapy	1,033	132	901	1,015	128	887	18	4	14
All other health services and paramedical technologies	1,599	861	738	1,227	645	582	372	216	156
Natural science technologies	19,214	11,536	7,678	14,431	8,743	5,688	4,783	2,793	1,990
Natural science, general	1,026	708	318	770	477	293	256	231	25
Agriculture	8,523	5,729	2,794	5,810	3,900	1,910	2,713	1,829	884
Forestry and wildlife	1,652	1,305	347	1,527	1,194	333	125	111	14
Food services	3,771	2,168	1,603	3,080	1,816	1,264	691	352	339
Home economics	2,107	188	1,919	1,402	106	1,296	705	82	623
Marine and oceanographic	423	345	78	421	343	78	2	2	- - -
Laboratory, general	253	94	159	252	94	158	1	- - -	1
Sanitation and public health inspection	638	464	174	464	349	115	174	115	59
All other natural science technologies	821	535	286	705	464	241	116	71	45
Mechanical and engineering technologies	72,524	67,127	5,397	51,260	47,367	3,893	21,264	19,760	1,504
Mechanical and engineering, general	5,659	5,080	579	4,843	4,381	462	816	699	117
Aeronautical and aviation	4,445	4,243	202	3,742	3,549	193	703	694	9
Engineering graphics	3,624	2,927	697	2,605	2,140	465	1,019	787	232
Architectural drafting	3,387	2,657	730	2,957	2,361	596	430	296	134
Chemical	781	504	277	701	435	266	80	69	11
Automotive	8,233	8,002	231	4,421	4,316	105	3,812	3,686	126
Diesel	2,564	2,535	29	1,596	1,582	14	968	953	15
Welding	3,811	3,634	177	1,142	1,114	28	2,669	2,520	149
Civil	2,168	1,957	211	2,036	1,852	184	132	105	27
Electronics and machine	14,801	13,931	870	12,653	11,998	655	2,148	1,933	215
Electromechanical	2,144	2,070	74	1,819	1,760	59	325	310	15
Industrial	3,425	3,197	228	2,085	1,963	122	1,340	1,234	106
Textile	371	132	239	296	92	204	75	40	35
Instrumentation	779	722	57	613	578	35	166	144	22
Mechanical	3,634	3,420	214	2,605	2,479	126	1,029	941	88
Nuclear	161	145	16	136	120	16	25	25	- - -
Construction and building	10,093	9,842	251	5,256	5,125	131	4,837	4,717	120
All other mechanical engineering technologies	2,444	2,129	315	1,754	1,522	232	690	607	83
Non-science- and non-engineering-related curriculum	159,801	62,137	97,664	133,852	56,243	77,609	25,949	5,894	20,055

SOURCE: Digest of Education Statistics, 1982, National Center for Education Statistics

TABLE 7-29

ASSOCIATE DEGREES AND OTHER AWARDS BASED ON OCCUPATIONAL CURRICULUMS BY LENGTH AND TYPE OF CURRICULUM AND SEX, 1979-80 (continued)

Curriculum	All awards			Awards based on organized occupational curriculums of—					
				At least 2 years but less than 4 years			At least 1 year but less than 2 years		
	Total	Men	Women	Total	Men	Women	Total	Men	Women
1	2	3	4	5	6	7	8	9	10
Business and commerce technologies	124,485	44,512	79,973	102,557	40,591	61,966	21,928	3,921	18,007
Business and commerce, general	23,532	13,028	10,504	21,161	11,933	9,228	2,371	1,095	1,276
Accounting	15,417	5,846	9,571	13,337	5,345	7,992	2,080	501	1,579
Banking and finance	1,250	638	612	1,095	575	520	155	63	92
Marketing, distribution, purchasing, business, and industrial management	28,326	15,851	12,475	26,405	14,980	11,425	1,921	871	1,050
Secretarial	33,291	511	32,780	23,454	343	23,111	9,837	168	9,669
Personal service	3,652	376	3,276	966	89	877	2,686	287	2,399
Photography	1,014	668	346	880	587	293	134	81	53
Communications and broadcasting	2,065	1,267	798	1,932	1,185	747	133	82	51
Printing and lithography	885	589	296	747	545	202	238	144	94
Hotel and restaurant management	2,421	1,439	982	2,233	1,353	880	188	86	102
Transportation and public utility	1,431	788	643	901	593	308	530	195	335
Applied arts, graphic arts, and fine arts	8,441	2,434	6,007	7,162	2,226	4,936	1,279	208	1,071
All other business and commerce technologies	2,660	977	1,683	2,284	837	1,447	376	140	236
Public service related technologies	35,316	17,625	17,691	31,295	15,652	15,643	4,021	1,973	2,048
Public service related, general	2,565	683	1,982	2,275	588	1,687	390	95	295
Bible study or religion related	1,831	1,030	801	1,704	976	728	127	54	73
Education	6,624	857	5,767	5,787	810	4,977	837	47	790
Library assistant	532	46	486	431	42	389	101	4	97
Police, law enforcement, corrections	14,465	10,663	3,802	13,076	9,520	3,556	1,389	1,143	246
Recreation and social work related	4,036	1,116	2,920	3,833	1,044	2,789	203	72	131
Fire control	2,429	2,357	72	2,056	1,992	64	373	365	8
Public administration and management	852	492	360	689	370	319	163	122	41
Other	1,882	381	1,501	1,444	310	1,134	438	71	367

SOURCE: Engineering and Technology Degrees 1977-1982, Engineering Manpower Commission

TABLE 7-30

CERTIFICATES AWARDED IN ENGINEERING AND INDUSTRIAL TECHNOLOGY BY SEX AND MINORITY GROUP, 1977-1982

	ENGINEERING TECHNOLOGY						INDUSTRIAL TECHNOLOGY					
	1977	1978	1979	1980	1981	1982	1977	1978	1979	1980	1981	1982
Total	**614**	**661**	**430**	**533**	**509**	**402**	**1,246**	**1,584**	**731**	**406**	**1,471**	**1,502**
Women	18	55	13	41	79	77	28	65	39	41	137	143
Blacks	21	16	27	96	22	30	34	101	43	22	101	118
Hispanics	2	12	14	24	8	11	18	78	33	13	103	32
Asian/Pacific	2	4	2	13	4	60	4	36		4	11	7
American Indian	10	10	2	4	6	1	34	131		5	9	16

SOURCE: 1980 Census, Special EEO File, Bureau of the Census

TABLE 7-31

Science, Engineering and Related Technicians by Field, Sex and Race/Ethnicity, 1980

Occupations	All Persons	Males							Females						
		Total Males	Males Not of Spanish Origin					Males of Spanish Origin	Total Females	Females Not of Spanish Origin					Females of Spanish Origin
			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.	
Technicians	46404	26901	23059	1706	144	693	36	1264	19503	16393	1521	47	555	12	975
Biological	100.00%	57.97%	49.69%	3.68%	0.31%	1.49%	0.08%	2.72%	42.03%	35.33%	3.28%	0.10%	1.20%	0.03%	2.10%
Chemical	73423	56768	48437	4497	153	1456	58	2168	16655	13570	1838	78	470	15	684
	100.00%	77.32%	65.97%	6.12%	0.21%	1.98%	0.08%	2.95%	22.68%	18.48%	2.50%	0.11%	0.64%	0.02%	0.93%
Science, Misc.	73033	48724	42389	2474	185	1512	73	2091	24309	19914	2291	118	733	32	1211
	100.00%	66.72%	58.04%	3.39%	0.25%	2.07%	0.10%	2.86%	33.28%	27.27%	3.15%	0.16%	1.00%	0.04%	1.66%
Electrical/Electronic	266184	235581	204079	12442	893	7974	341	9852	30603	23362	3663	148	1265	44	2123
	100.00%	88.50%	76.67%	4.67%	0.34%	3.00%	0.13%	3.70%	11.50%	8.78%	1.38%	0.05%	0.48%	0.02%	0.80%
Industrial Engineering	10644	8404	7638	400	20	46	12	288	2240	1945	163	7	25	0	100
	100.00%	78.96%	71.76%	3.76%	0.19%	0.43%	0.11%	2.71%	21.04%	18.27%	1.53%	0.07%	0.23%	0.00%	0.94%
Mechanical Engineering	15592	14588	13108	637	35	321	29	458	1004	838	86	0	8	0	72
	100.00%	93.58%	84.07%	4.09%	0.22%	2.06%	0.19%	2.94%	6.44%	5.37%	0.55%	0.00%	0.05%	0.00%	0.46%
Engineering, Misc.	272034	207139	186482	9127	718	3951	197	6686	64895	53938	6054	166	2094	104	2539
	100.00%	76.14%	68.54%	3.36%	0.26%	1.45%	0.07%	2.46%	23.86%	19.83%	2.23%	0.06%	0.77%	0.04%	0.93%
Surveying/Mapping	53094	48572	44060	1398	635	414	21	2044	4522	3752	456	63	89	0	162
	100.00%	91.48%	82.98%	2.63%	1.20%	0.78%	0.04%	3.85%	8.52%	7.07%	0.86%	0.12%	0.17%	0.00%	0.31%
Technicians, Misc.	338002	237690	201792	13456	840	12637	408	8557	100312	81030	10717	489	4340	145	3591
	100.00%	70.32%	59.70%	3.98%	0.25%	3.74%	0.12%	2.53%	29.68%	23.97%	3.17%	0.14%	1.28%	0.04%	1.06%
Drafting Occupations	329467	274659	237890	12520	1319	8324	302	14304	54808	47509	2631	257	1832	52	2527
	100.00%	83.36%	72.20%	3.80%	0.40%	2.53%	0.09%	4.34%	16.64%	14.42%	0.80%	0.08%	0.56%	0.02%	0.77%

CHAPTER 8

AGRICULTURAL, BIOLOGICAL, MEDICAL AND HEALTH SCIENCES

AGRICULTURAL AND BIOLOGICAL SCIENCES

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FIELD: Agricultural & Biological Sciences

SOURCE: Tables throughout Professional Women and Minorities

TABLE 8-1

SUMMARY TABLE

Proportion of Women in the Agricultural & Biological Sciences

	Agricultural		Biological	
Degrees Granted	**1960-76**	**1981**	**1960-76**	**1981**
Bachelor's	7.9	30.8	30.1	44.1
Master's	7.4	23.5	29.5	38.9
Doctorates	3.2	12.8	18.5	29.0
General Labor Force	**1972**	**1980**	**1972**	**1980**
	5.5	22.7	28.6	33.1
Doctoral Labor Force	**1973**	**1981**	**1973**	**1981**
	1.3	3.1	13.6	19.6
Academic Labor Force	**1974-75**	**1981-82**	**1974-75**	**1981-82**
(Doctoral)	1.3	2.5	14.9	16.3
Total	12.1	9.3	19.7	22.0
Federal Labor Force	**1976**	**1980**	**1976**	**1980**
	0.6	3.2	16.0	19.7

TABLE 8-2

SUMMARY TABLE

Proportion of Minorities in the Life Sciences - Agricultural & Biological Sciences

	Blacks		American Indian		Asian/ Pacific		Hispanic	
	Ag.	Biol.	Ag.	Biol.	Ag.	Biol.	Ag.	Biol.
Degrees Granted								
Bachelor's	0.3	5.3	0.4	0.3	1.4	3.4	1.1	2.6
Master's	1.8	2.9	0.2	0.3	1.7	2.4	1.6	1.2
Doctorates, 1981	2.5	1.5	0.3	0.2	4.0	4.4	2.2	1.3
General Labor Force, 1980	5.0	3.6	0.3	0.2	2.6	5.4	2.5	2.1
Doctoral Labor Force, 1981	1.2	1.2	0.7	0.6	4.5	7.4	N.A.	N.A.
Federal Labor Force, 1980	3.4	5.5	1.6	1.2	0.3	1.5	1.7	1.4

FIELD: Agricultural Sciences

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade, National Research Council, March 1973.
Doctorate Recipients from United States Universities Summary Reports, 1972 - 1981, National Research Council.

TABLE 8-3

DOCTORATES AWARDED FROM 1920 TO 1981 BY SUBFIELD OF DOCTORATE AND SEX

	CY1920-FY1972			FY1973-FY1977			FY1978			FY1979-FY1980			FY1981		
	Total	Women	% Women	Total	Women	% Women	Total	Women	% Women	Total	Women	% Women	Total	Women	% Women
Agricultural Sci. Subtotal	13,662	227	1.7	4,934	248	5.0	1,012	70	6.9	2,080	200	9.6	1,150	147	12.8
Agronomy	3,804	27	0.7	685	13	1.9	137	8	5.8	289	19	6.6	177	15	8.5
Agricultural Economics[1]	536	5	0.9	825	21	2.5	159	5	3.1	313	23	7.3	168	13	7.7
Animal Husbandry	2,460	35	1.3	116	3	2.6	21			51	3	5.9	19		
Animal Sci.[2] & Ani. Nutri.[3]				599	34	5.7	101	8	7.9	231	21	9.1	149	17	11.4
Food Science & Technology[1]	233	24	10.3	502	92	18.3	117	25	21.4	209	46	22.0	104	28	26.9
Fish & Wildlife	501	6	1.2	288	73	25.3	61	2	3.3	139	9	6.5	66	9	13.6
Forestry	1,031	1	0.1	387	5	1.3	88	3	3.4	167	11	6.6	95	6	6.3
Horticulture	1,624	37	2.3	283	13	4.6	65	1	1.5	142	17	12.0	85	17	20.0
Soils & Soil Science[4]	217	6	2.8	434	6	1.4	97	5	5.2	150	9	6.0	90	7	7.8
Phytopathology	1,949	62	3.2	458	34	7.4	89	6	6.7	206	33	16.0	99	21	21.2
Agriculture, General[5]	175	2	1.1	32	2	6.3	6	2	33.3	10			5	1	20.0
Agriculture, Other	1,132	25	2.2	486	16	3.3	71	5	7.0	173	9	5.2	93	13	14.0

[1]Added in 1971.
[2]Added in 1973.
[3]Added in 1975.
[4]Added in 1968 as "Range Management." Changed to "Soils & Soil Science" in 1971. Previous cases under "Range Management" were converted to "Agriculture, Other."
[5]Subfields were not specified until FY 1958. Except for a few cases in earlier years, all doctorates were included in the "general" classification of their respective fields.

FIELD: Agricultural Sciences

SOURCE: Earned Degrees Conferred Series, 1947-48 through 1980-81, U.S. Office of Education (NCES)

TABLE 8-4

DEGREES AWARDED, BY SEX AND LEVEL OF DEGREE, 1947-48 - 1980-81

	BACHELOR'S			MASTER'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1947-48 thru 1959-60	93,274	1,657	1.8	14,111	262	1.9
1960-61 thru 1969-70	59,136	2,001	3.4	13,009	580	4.5
1970-71	10,884	517	4.8	2,167	135	6.2
1971-72	13,560	740	5.5	2,691	190	7.1
1972-73	14,819	1,104	7.5	2,822	222	7.9
1973-74	16,303	1,576	9.7	2,939	289	9.8
1974-75	17,573	2,472	14.1	3,076	364	11.8
1975-76	19,460	3,570	18.3	3,351	478	14.3
1976-77	21,467	4,777	22.3	3,724	547	14.7
1977-78	22,724	5,594	24.6	4,036	756	18.7
1978-79	23,247	6,303	27.1	4,007	808	20.2
1979-80	22,903	6,787	29.6	3,987	894	22.4
1980-81	21,886	6,732	30.8	4,003	942	23.5
TOTAL	357,236	43,830	12.3	63,923	6,467	10.1

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade and Doctorate Recipients from United States Universities, Summary Reports 1971-1981, National Research Council

TABLE 8-5

DOCTORAL DEGREES BY SEX, 1920-1981

	Total Both Sexes	Women Only	% Women
CY 1920 thru FY 1959*	4,772	60	1.3
FY 1960 thru FY 1969	5,119	79	1.5
FY 1970-72	2,770	87	3.1
FY 1973	953	37	3.9
FY 1974	1,010	48	4.8
FY 1975	1,066	46	4.3
FY 1976	951	54	5.7
FY 1977	924	63	6.8
FY 1978	1,012	70	6.9
FY 1979	1,008	91	9.0
FY 1980	1,072	109	10.2
FY 1981	1,150	147	12.8
TOTAL	21,807	891	4.1

*Data aggregated on a calendar year (CY) basis from 1920 to 1957 and on a fiscal year (FY) basis from 1958 (July 1, 1957 to June 30, 1958) to the present.

FIELD: Biological Sciences

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorates, Sex and Decade, National Research Council, March 1973.
Doctorate Recipients from United States Universities Summary Report, 1972-1981, National Research Council.

TABLE 8-6

DOCTORATES AWARDED FROM 1920 TO 1981 BY SUBFIELD OF DOCTORATE AND SEX

	CY1920-FY1972			FY1973-FY1977			FY 1978			FY1979-FY1980			FY1981		
	Total	Women	% Women	Total	Women	% Women	Total	Women	% Women	Total	Women	% Women	Total	Women	% Women
Biological Sciences Subtotal	48,122	7,359	15.3	13,790	3,656	26.5	3,192	815	25.5	6,728	1,844	28.0	3,397	986	29.0
Biochemistry	9,600	1,519	15.8	3,086	699	22.7	607	146	24.1	1,272	344	27.0	644	189	29.3
Biophysics	1,126	101	9.0	611	70	11.5	110	22	20.0	241	32	13.3	99	10	10.1
Biometrics, Biostatistics	329	54	16.4	204	42	20.6	45	9	20.0	86	24	27.9	48	12	25.0
Physiology, Animal	2,686	396	14.7	1,605	291	18.1	315	58	18.4	651	144	22.1	327	80	24.5
Physiology (Animal & Plant)[1]	2,349	350	14.9				358	63	17.6	760	166	21.8	395	91	23.0
Physiology, Plant[1]	877	82	9.4	341	66	19.4	43	5	11.6	109	22	20.2	68	11	16.2
Nutrition[2]	543	154	28.4	166	88	53.0	90	56	62.2	197	130	66.0	99	59	59.6
Molecular Biology[3]	447	120	26.8	690	203	29.4	172	54	31.4	322	93	28.9	185	68	36.8
Anatomy	1,770	333	18.8	617	139	22.5	143	41	28.7	298	93	31.2	156	48	30.8
Cytology[4]	394	137	34.8	197	68	34.5	33	9	27.3	83	24	28.9	47	14	29.8
Entomology	3,241	152	4.7	824	64	7.7	146	12	8.2	322	36	11.2	143	13	9.1
Microbiology & Bacteriology[5]	6,604	1,144	17.3	1,795	475	26.5	348	100	28.7	711	233	32.8	353	103	29.2
Genetics	2,429	329	13.5	692	193	27.9	126	44	35.0	298	107	35.9	157	62	39.5
Embryology[4]	339	104	30.7	109	33	30.3	15	4	26.7	32	14	43.8	20	10	50.0
Ecology	946	60	6.3	825	89	10.8	170	20	11.8	342	61	17.8	197	52	26.4
Hydrobiology	216	12	5.6	62	5	8.1	3	1	33.3	10	3	30.0			
Botany	5,072	815	16.1	895	182	20.6	147	46	31.3	286	76	26.6	147	42	28.6
Zoology	7,366	1,056	14.4	1,[illegible]	265	19.3	231	48	20.8	476	105	22.1	197	47	23.9
Immunology[6]				[illegible]	113	29.4	93	29	31.2	258	88	34.1	149	60	40.3
Biological Sciences, Gen.[7]	1,024	194	18.9	921	266	28.9	190	64	33.7	398	113	28.4	207	60	29.0
Biological Sciences, Other	1,034	247	23.9	995	316	31.8	165	47	28.5	336	102	30.4	154	46	29.9

[1]In 1962 "Physiology" was broken out into "Animal Physiology" and "Plant Physiology."
[2]Dropped in 1960. Added in 1976 with Dietetics.
[3]Added in 1968.
[4]Added in 1962.
[5]Originally specified as "Microbiology." "Bacteriology" was added in 1970.
[6]Added in 1973.
[7]Subfields were not specified until FY1958. Except for a few cases in earlier years, all doctorates were included in the "General" classification of their respective fields.

FIELD: Biological Sciences

SOURCE: Earned Degrees Conferred Series, 1947-48 thru 1980-81 U.S. Office of Education (NCES)

TABLE 8-7

DEGREES AWARDED, BY SEX AND LEVEL OF DEGREE, 1947-48 - 1980-81

	BACHELOR'S			MASTER'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1947-48 thru 1959-60	159,518	41,140	25.8	25,843	5,432	21.0
1960-61 thru 1969-70	255,783	72,606	28.4	41,177	11,404	27.7
1970-71	35,411	10,414	29.4	5,756	1,943	33.8
1971-72	37,638	11,147	29.6	6,126	2,027	33.1
1972-73	42,672	12,824	30.0	6,294	1,924	30.6
1973-74	48,856	15,378	31.5	6,581	2,014	30.6
1974-75	52,236	17,416	33.3	6,591	1,976	30.1
1975-76	54,913	19,119	34.8	6,621	2,103	31.8
1976-77	53,605	19,387	36.2	7,114	2,396	33.7
1977-78	52,213	20,223	38.7	6,851	2,430	35.5
1978-79	49,576	20,105	40.6	6,879	2,592	37.7
1979-80	47,111	19,976	42.4	6,536	2,425	37.1
1980-81	43,216	19,067	44.1	5,978	2,324	38.9
TOTAL	932,748	298,793	32.0	138,347	40,990	29.6

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade and Doctorate Recipients from United States Universities, Summary Reports 1971-1981, National Research Council

TABLE 8-8

DOCTORAL DEGREES BY SEX, 1920-1981

	Total Both Sexes	Women Only	% Women
CY 1920 thru FY 1959*	16,537	2,428	14.7
FY 1960 thru FY 1969	13,933	2,026	14.5
FY 1970-72	8,052	1,386	17.2
FY 1973	2,743	590	21.5
FY 1974	3,190	687	21.5
FY 1975	3,247	769	23.7
FY 1976	3,245	752	23.1
FY 1977	3,172	729	23.0
FY 1978	3,192	815	25.5
FY 1979	3,317	889	26.8
FY 1980	3,411	955	28.0
FY 1981	3,397	986	29.0
TOTAL	67,435	13,012	19.3

*Data aggregated on a calendar year (CY) basis from 1920 to 1957 and on a fiscal year (FY) basis from 1958 (July 1, 1957 to June 30, 1958(to the present.

FIELD: Life Sciences

SOURCE: Foreign Participation in U.S. Science and Engineering Education and Labor Markets, Special Report, NSF 81-316, National Science Foundation, September 1981; and Summary Report, U.S. Doctorate Recipients from U.S. Universities, 1980 and 1981, National Research Council, 1981 and 1982.

TABLE 8-9

NUMBER OF PH.D. RECIPIENTS BY TYPE OF CITIZENSHIP, 1960-1981

BIOSCIENCES			FOREIGN			
Year	Total	U.S.	Total	Immi-grants	Non-Immi-grants	Citizen-ship not known
1960	1,246	1,048	188	40	148	10
1961	1,244	1,020	208	35	173	16
1962	1,397	1,167	215	14	201	15
1963	1,510	1,252	246	37	209	12
1964	1,702	1,376	293	43	250	33
1965	1,963	1,583	360	53	307	20
1966	2,135	1,740	365	52	313	30
1967	2,361	1,947	378	80	298	36
1968	2,822	2,324	470	111	359	28
1969	3,084	2,586	463	123	340	35
1970	3,359	2,813	522	161	361	24
1971	3,652	3,063	511	199	312	78
1972	3,663	3,049	535	225	310	79
1973	3,731	3,085	570	251	319	76
1974	3,585	2,829	587	217	370	169
1975	3,636	3,024	532	202	330	80
1976	3,692	3,090	500	170	330	102
1977	3,484	2,909	479	160	319	96
1978	3,508	2,988	432	142	290	88
1979	3,640	3,119	429	132	297	92
1980	3,411	2,944	392	126	266	75
1981	3,397	2,948	363	111	252	86

AGRICULTURAL SCIENCES			FOREIGN			
Year	Total	U.S.	Total	Immi-grants	Non-Immi-grants	Citizen-ship not known
1960	414	306	107	16	91	1
1961	438	338	98	6	92	2
1962	470	344	126	14	112	-
1963	466	365	97	7	90	4
1964	517	366	149	14	135	2
1965	576	380	189	17	172	7
1966	576	379	186	11	175	11
1967	606	408	195	13	182	3
1968	681	450	225	29	196	6
1969	720	488	229	28	201	3
1970	804	564	237	38	199	3
1971	902	597	302	65	237	3
1972	853	533	316	85	231	4
1973	853	542	308	75	233	3
1974	820	461	336	65	271	23
1975	904	563	336	70	266	5
1976	788	499	281	37	244	8
1977	782	488	283	27	256	11
1978	853	531	310	43	267	12
1979	855	543	294	29	265	18
1980	1,072	666	391	42	349	15
1981	1,150	685	434	46	388	31

SOURCE: Supply and Demand for Scientists and Engineers, Scientific Manpower Commission, 1982
Data Source: National Center for Education Statistics

TABLE 8-10

DEGREES IN AGRICULTURAL AND BIOLOGICAL SCIENCES 1970-1981 PROJECTED TO 1989

Year	Bachelor's Degrees				Master's Degrees				Doctoral Degrees			
	Agriculture/ Nat. Resources		Biological Sciences		Agriculture/ Nat. Resources		Biological Sciences		Agriculture/ Nat. Resources		Biological Sciences	
	Total	% W	Total	% W	Total	% W	Total	% W	Total	% W	Total	% W
1970	12,382	4.1	37,031	28.0	2,197	6.3	5,800	31.5	1,004	2.8	3,289	14.3
1971	12,672	4.2	35,743	29.1	2,457	5.9	5,728	33.5	1,086	2.9	3,654	16.3
1972	13,516	5.5	37,293	29.4	2,680	7.1	6,101	33.0	971	2.7	3,653	17.0
1973	14,756	7.4	42,233	29.8	2,807	7.8	6,263	30.5	1,059	2.6	3,636	19.5
1974	16,253	9.7	48,340	31.2	2,928	9.8	6,552	30.5	930	3.5	3,439	20.3
1975	17,528	14.1	51,741	33.1	3,067	11.9	6,550	30.0	991	3.3	3,384	22.0
1976	19,402	18.3	54,275	34.6	3,340	14.3	6,582	31.7	928	6.6	3,392	21.5
1977	21,467	22.3	53,605	36.2	3,724	14.7	7,114	33.7	893	6.9	3,397	21.4
1978	22,650	24.6	51,502	38.4	4,023	18.8	6,806	35.4	971	6.4	3,309	24.1
1979	23,247	27.1	49,576	40.6	4,007	20.2	6,879	37.7	950	7.7	3,548	25.6
1980	22,903	29.6	47,111	42.4	3,987	22.4	6,536	37.1	991	11.3	3,638	26.0
1981	21,886	30.8	43,216	44.1	4,003	23.5	5,978	38.9	1,067	11.9	3,718	28.3
Projected												
1981	25,740	26.4	55,890	38.7	4,370	24.9	6,880	41.0	1,100	6.3	3,510	25.1
1982	26,430	26.3	57,480	39.8	4,570	25.2	7,020	41.0	1,120	6.3	3,480	24.4
1983	27,080	26.6	57,570	39.8	4,760	25.8	7,120	41.6	1,110	6.3	3,350	24.8
1984	27,550	27.2	57,080	39.9	4,850	24.9	7,160	42.2	1,100	6.4	3,250	25.2
1985	27,800	27.6	56,140	40.1	4,990	24.2	7,170	42.0	1,080	6.5	3,140	25.5
1986	27,920	28.0	55,980	39.7	5,050	24.0	7,090	42.2	1,080	6.5	3,040	26.0
1987	28,000	28.4	54,910	41.9	5,100	23.3	6,990	42.5	1,070	6.5	2,950	26.4
1988	28,070	28.3	54,870	42.9	5,100	22.4	6,760	42.0	1,070	7.5	2,850	26.7
1989	28,550	28.8	55,030	43.5	5,120	21.7	6,570	42.2	1,060	7.5	2,760	27.2

Source: National Center for Education Statistics

SOURCE: 1980 Census of Occupations, Special EEO File, Bureau of the Census

TABLE 8-11

LIFE SCIENTISTS IN ACADEMIC AND NON-ACADEMIC EMPLOYMENT BY SEX AND RACE/ETHNICITY, 1980

	TOTAL		Biolog. Science Teachers		Life & Other Biol. Scientists		Agric/Forestry Teachers		Other Agric/ Food Scientists		Forestry/Conserv. Scientists	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
TOTAL	**119,699**	**100.00**	**9,651**	**100.00**	**46,079**	**100.00**	**3,813**	**100.00**	**24,589**	**100.00**	**35,567**	**100.00**
MALES	**91,617**	**76.54**	**6,537**	**67.73**	**30,840**	**66.93**	**3,246**	**85.13**	**19,009**	**77.31**	**31,985**	**89.93**
White*	83,863	70.06	6,095	63.15	27,825	60.39	3,009	78.91	17,236	70.10	29,662	83.40
Black*	2,867	2.40	122	1.26	871	1.89	122	3.20	797	3.24	955	2.69
Indian/Alaskan Nat.*	600	0.50	8	0.08	60	0.13	18	0.47	47	0.19	467	1.31
Asian/Pacific Isl.*	2,397	2.00	230	2.38	1,483	3.22	41	1.08	438	1.78	205	0.58
Other Race*	133	0.11	7	0.07	60	0.13	18	0.47	12	0.05	33	0.09
Hispanic	1,796	1.50	75	0.78	541	1.17	38	1.00	479	1.95	663	1.86
FEMALES	**28,082**	**23.42**	**3,114**	**32.27**	**15,239**	**33.07**	**561**	**14.87**	**5,580**	**22.69**	**3,582**	**10.07**
White*	24,116	20.15	2,784	28.83	12,898	27.99	521	13.66	4,780	19.44	3,133	8.81
Black*	1,639	1.37	171	1.77	806	1.75	37	0.97	437	1.78	188	0.53
Indian/Alaskan Nat.*	171	0.14	13	0.13	52	0.11	0	0.00	37	0.15	69	0.19
Asian/Pacific Isl.*	1,358	1.13	113	1.17	1,012	2.20	2	0.05	198	0.81	63	0.18
Other Race*	37	0.03	5	0.05	32	0.07	0	0.00	0	0.00	0	0.00
Hispanic	733	0.61	30	0.31	439	0.95	7	0.18	128	0.52	129	0.36

* Non-Hispanic

FIELD: Biological Sciences

SOURCE: Federal Civilian Workforce Statistics, Equal Employment Opportunity Statistics, U.S. Office of Personnel Management, AR-80-71, Nov. 1980

TABLE 8-12

NUMBER AND PERCENT OF FEDERAL WORKERS EMPLOYED IN THE BIOLOGICAL SCIENCES BY OCCUPATIONAL TITLE, SEX AND MINORITY STATUS, NOVEMBER 1980

OCCUPATIONAL TITLE	ALL EMPLOYEES			TOTAL MINORITY				BLACK		HISPANIC		AM. INDIAN		ASIAN		ALL OTHERS	
	Total	Women	% W	Total	%	Women	% W	No.	% B	No.	% H	No.	% I	No.	% A	No.	% O
General Biological Sciences	4,318	851	19.7	418	9.7	127	2.9	239	5.5	60	1.4	53	1.2	66	1.5	3,900	90.3
Microbiology	1,767	604	34.2	223	12.6	91	5.1	125	7.1	33	1.9	0	0.0	65	3.7	1,544	87.4
Biological Technician	5,885	2,027	34.4	1,278	21.7	420	7.1	930	15.8	238	4.0	38	0.6	72	1.2	4,607	78.3
Agricultural Extension	50	14	28.0	4	8.0	1	2.0	2	4.0	1	2.0	0	0.0	1	2.0	46	92.0
Zoology	134	18	13.4	5	3.7	1	0.7	4	3.0	1	0.7	0	0.0	0	0.0	129	96.3
Physiology	400	65	16.3	30	7.5	5	1.3	13	3.3	5	1.3	1	0.3	11	2.8	370	92.5
Entomology	743	30	4.0	31	4.2	2	0.3	12	1.6	7	0.9	4	0.5	8	1.1	712	95.8
Botany	179	47	26.3	11	6.1	3	1.7	6	3.4	3	1.7	0	0.0	2	1.1	168	93.9
Plant Pathology	310	18	5.8	20	6.5	3	1.0	6	1.9	3	1.0	0	0.0	11	3.5	290	93.5
Plant Physiology	263	16	6.1	16	6.1	5	1.9	5	1.9	1	0.4	0	0.0	10	3.8	247	93.9
Horticulture	101	14	13.9	6	5.9	0	0.0	2	2.0	3	3.0	0	0.0	1	1.0	95	94.1
Genetics	239	17	7.1	12	5.0	1	0.4	1	0.4	0	0.0	0	0.0	11	4.6	227	95.0
Range Conservation	1,246	70	5.6	89	7.1	1	0.1	1	0.1	52	4.2	34	2.7	2	0.2	1,157	92.9
Soil Conservation	4,703	144	3.1	418	8.9	5	0.1	262	5.6	95	2.0	54	1.1	7	0.1	4,285	91.1
Forestry	5,697	86	1.5	202	3.5	0	0.0	21	0.4	31	0.5	143	2.5	7	0.1	5,495	96.5
Soil Science	1,928	69	3.6	156	8.1	2	0.1	108	5.6	20	1.0	14	0.7	14	0.7	1,772	91.9
Agronomy	343	3	0.9	9	2.6	0	0.0	6	1.7	2	0.6	1	0.3	0	0.0	334	97.4
Agricultural Management	2,805	160	5.7	271	9.7	6	0.2	178	6.3	77	2.7	14	0.5	2	0.1	2,534	90.3
Fishery Biology	1,308	94	7.2	85	6.5	10	0.8	31	2.4	17	1.3	14	1.1	23	1.8	1,223	93.5
Wildlife Biology	1,210	106	8.8	33	2.7	6	0.5	10	0.8	14	1.2	5	0.4	4	0.3	1,177	97.3

FIELD: Health Professions

SOURCE: Tables throughout Professional Women and Minorities

TABLE 8-13

CURRENT ENROLLMENTS AND GRADUATES IN THE HEALTH PROFESSIONS BY SEX

	FIRST YEAR ENROLLMENTS			TOTAL ENROLLMENTS			GRADUATES		
	Total	Women	% W	Total	Women	% W	Total	Women	% W
Medicine (1982)	17,320	5,343	30.8	66,485	18,555	27.9	15,985	3,991	25.0
Osteopathic Medicine (1982)	1,582	378	23.9	5,304	1,108	20.9	1,017	186	18.3
Dentistry (1982)	5,855	1,268	21.7	22,621	4,227	18.7	5,550	825	14.9
Veterinary Medicine (1983)	2,247	1,124	50.0	8,682	4,028	46.4	1,886	668	35.4
Optometry (1982)	1,162	310	26.7	4,541	1,077	23.7	1,113	224	20.1
Pharmacy (1983)	6,574	3,496	53.2	19,350	9,794	50.6	6,448	3,031	47.0
Podiatry (1983)	724	150	20.7	2,608	428	16.4	599	63	10.5
Nursing, B.S. (1981)							32,794	31,140	95.0

TABLE 8-14

TOTAL ENROLLMENTS IN SELECTED U.S. HEALTH PROFESSIONS SCHOOLS BY RACIAL/ETHNIC CATEGORY

	TOTAL	TOTAL MINORITY	BLACK		AMERICAN INDIAN		HISPANIC		ASIAN AMERICAN		WHITE AND ALL OTHERS	
			No.	%	No.	%	No.	%	No.	%	No.	%
Medicine (1982)	66,485	9,303	5,791	5.8	234	0.4	2,997	4.1	2,281	3.5	57,182	86.0
Osteopathic Medicine (1982)	5,304	301	104	2.0	26	0.5	62	1.2	109	2.1	5,003	94.3
Dentistry (1981-82)	22,621	2,839	999	4.4	61	0.3	583	2.6	1,196	5.3	19,782	87.4
Veterinary Medicine (1979-80)[1]	7,007	307	96	1.8	6	0.1	22	0.4	8	0.2	5,073	97.5
Optometry (1981-82)	4,541	447	57	1.3	9	0.2	98	2.2	283	6.2	4,094	90.2
Pharmacy (1982)	19,350	3,943	935	4.8	36	0.2	784	4.1	1,072	5.5	15,407	79.6
Podiatry (1982-83)	2,608	267	154	5.9	5	0.2	33	1.3	75	2.9	2,341	89.8
Nursing (1980-81)[2]	238,473	23,315	14,365	6.0			5,795	2.4	3,155[3]	1.3	215,158	90.2
Baccalaureate	96,099	11,147	6,126	6.4			3,339	3.5	1,682[3]	1.8	84,952	88.4
Associate Degree	101,365	9,800	6,522	6.4			2,034	2.0	1,244[3]	1.2	91,565	90.3
Diploma	41,009	2,368	1,717	4.2			422	1.0	229[3]	0.6	38,641	94.2

[1] Total and Total Minority data are for 1979-80. Racial/Ethnic breakouts are for 1972.

[2] Based only on programs which reported.

[3] Includes American Indian and Aleut.

FIELD: Health Professions

SOURCE: 1980 Census, Special EEO File, Bureau of the Census

TABLE 8-15

MEDICAL AND HEALTH PROFESSIONALS BY SEX AND RACE/ETHNICITY, 1980

	Dentists		Physicians		Optometrists		Podiatrists		Veterinarians	
	No.	%	No.	%	No.	%	No.	%	No.	%
TOTAL	**125,291**	**100.00**	**433,255**	**100.00**	**24,605**	**100.00**	**7,781**	**100.00**	**34,355**	**100.00**
MALES	**116,916**	**93.32**	**375,289**	**86.62**	**22,569**	**91.73**	**7,124**	**91.56**	**29,797**	**86.73**
White*	108,990	86.99	317,142	73.20	21,544	87.56	6,805	87.46	28,706	83.56
Black*	2,666	2.13	10,090	2.33	198	0.80	203	2.61	402	1.17
Indian/Alaskan Native*	167	0.13	386	0.09	36	0.15	0	0.00	56	0.16
Asian/Pacific Isl.*	3,226	2.57	30,656	7.08	461	1.87	54	0.69	359	1.04
Other Race*	55	0.04	732	0.17	5	0.03	0	0.00	23	0.07
Hispanic	1,812	1.45	16,238	3.76	322	1.31	62	0.80	251	0.73
FEMALES	**8,357**	**6.68**	**57,966**	**13.38**	**2,036**	**8.27**	**657**	**8.44**	**4,558**	**13.27**
White*	6,890	5.50	40,700	9.39	1,765	7.17	538	6.91	4,216	12.27
Black*	468	0.37	3,153	0.73	56	0.23	78	1.00	120	0.35
Indian/Alaskan Native	18	0.01	127	0.03	8	0.03	0	0.00	6	0.02
Asian/Pacific Isl.	606	0.48	11,262	2.60	97	0.39	41	0.53	73	0.21
Other Race*	12	0.01	154	0.04	0	0.00	0	0.00	6	0.02
Hispanic	381	0.30	2,570	0.59	110	0.45	0	0.00	137	0.40

	Dieticians		Pharmacists		Med. & Health Managers		Registered Nurses		Lic. Practical Nurses	
	No.	%	No.	%	No.	%	No.	%	No.	%
TOTAL	**67,270**	**100.00**	**145,637**	**100.00**	**110,881**	**100.00**	**1,285,299**	**100.00**	**435,176**	**100.00**
MALES	**6,787**	**10.09**	**110,635**	**75.97**	**54,583**	**49.23**	**52,755**	**4.10**	**14,764**	**3.39**
White*	4,224	6.28	101,051	69.39	48,300	43.56	42,605	3.31	10,652	2.45
Black*	1,907	2.83	2,949	2.02	3,872	3.49	5,363	0.42	2,910	0.67
Indian/Alaskan Native*	25	0.04	158	0.11	205	0.18	175	0.01	128	0.03
Asian/Pacific Isl.*	179	0.27	4,313	2.96	709	0.64	1,892	0.15	322	0.07
Other Race*	27	0.04	136	0.09	38	0.03	110	0.01	18	0.00
Hispanic	425	0.63	2,028	1.39	1,459	1.32	2,610	0.20	734	0.17
FEMALES	**60,483**	**89.91**	**35,002**	**24.03**	**56,298**	**50.77**	**1,232,544**	**95.90**	**420,412**	**96.61**
White*	43,289	64.35	29,385	20.18	47,786	43.10	1,071,709	83.38	322,480	74.10
Black*	12,493	18.57	1,766	1.21	5,608	5.06	90,009	7.00	74,942	17.22
Indian/Alaskan Native*	307	0.46	89	0.06	359	0.32	3,681	0.29	2,662	0.61
Asian/Pacific Isl.	2,304	3.43	2,269	1.56	805	0.73	41,054	3.19	5,575	1.28
Other Race*	32	0.05	29	0.02	16	0.01	1,161	0.09	425	0.10
Hispanic	2,058	3.06	1,464	1.01	1,724	1.55	24,930	1.94	14,328	3.29

* Non-Hispanic

SOURCE: 1980 Census, Special EEO File, Bureau of the Census

TABLE 3-16

Health and Medical Technologists, Technicians, Assistants and Aides by Sex and Race/Ethnicity, 1980

Occupations	All Persons	Males							Females						
		Total Males	Males Not of Spanish Origin					Males of Spanish Origin	Total Females	Females Not of Spanish Origin					Females of Spanish Origin
			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.			White	Black	American Indian, Eskimo, Aleut	Asian, Pacific Islanders	Race Misc.	
Dental Assistants	158117	3294	2471	422	14	195	0	192	154823	137275	6213	818	2241	77	8199
	100.00%	2.08%	1.56%	0.27%	0.01%	0.12%	0.00%	0.12%	97.92%	86.82%	3.93%	0.52%	1.42%	0.05%	5.19%
Dental Hygienists	48192	708	588	37	0	68	0	37	47484	43559	662	37	486	23	717
	100.00%	1.53%	1.23%	0.08%	0.00%	0.15%	0.00%	0.08%	98.47%	94.30%	1.43%	0.08%	1.05%	0.05%	1.55%
Dental Laboratory/Medical Appliance Technicians	48748	33008	26519	1801	110	1726	32	2818	15740	13150	984	107	557	18	944
	100.00%	67.71%	54.40%	3.69%	0.23%	3.54%	0.07%	5.78%	32.29%	26.98%	1.98%	0.22%	1.14%	0.04%	1.94%
Health Aides, ex. nursing	292049	45375	29882	9920	417	1388	47	3723	246674	185389	42382	1501	3445	203	13754
	100.00%	15.54%	10.23%	3.40%	0.14%	0.47%	0.02%	1.27%	84.46%	63.48%	14.51%	0.51%	1.18%	0.07%	4.71%
Health Record Technologists/Technicians	15147	1314	945	196	8	67	12	86	13833	11477	1282	168	374	16	516
	100.00%	8.67%	6.24%	1.29%	0.05%	0.44%	0.08%	0.57%	91.33%	75.77%	8.46%	1.11%	2.47%	0.11%	3.41%
Health Technologists/ Technicians, Misc.	152539	55858	44338	6244	373	1928	120	2855	96681	76289	13930	521	2039	118	3784
	100.00%	36.62%	29.07%	4.09%	0.24%	1.26%	0.08%	1.87%	63.38%	50.01%	9.13%	0.34%	1.34%	0.08%	2.48%
Medical Diagnostic Technicians	492832	145389	111178	17116	791	7207	262	8835	347443	282762	39031	1342	12120	315	11873
	100.00%	29.50%	22.56%	3.47%	0.16%	1.46%	0.05%	1.79%	70.50%	57.37%	7.92%	0.27%	2.46%	0.06%	2.41%
Clinical Laboratory Technologists/Technicians	243982	62175	45783	8008	258	4084	123	3919	181807	145431	20068	604	9414	117	8173
	100.00%	25.48%	18.76%	3.28%	0.11%	1.67%	0.05%	1.61%	74.52%	59.61%	8.23%	0.25%	3.86%	0.05%	2.63%
Nursing Aides Orderlies/Attendants	1378118	168361	103172	49467	1358	2935	281	11148	1209757	798034	322742	10332	16757	1460	60432
	100.00%	12.22%	7.49%	3.59%	0.10%	0.21%	0.02%	0.81%	87.78%	57.91%	23.42%	0.75%	1.22%	0.11%	4.39%
Physicians' Assistants	30437	18211	15318	1401	132	294	21	1045	12226	9491	1808	79	338	6	706
	100.00%	59.83%	50.33%	4.60%	0.43%	0.97%	0.07%	3.43%	40.17%	31.18%	5.28%	0.26%	1.11%	0.02%	2.32%
Radiologic Technicians	96311	27356	21057	2864	160	1195	19	2061	68955	61042	5033	217	667	80	1916
	100.00%	28.40%	21.86%	2.97%	0.17%	1.24%	0.02%	2.14%	71.60%	63.38%	5.23%	0.23%	0.69%	0.08%	1.99%
Therapists															
Inhalation	48738	21179	16916	2124	90	519	6	1524	27559	22919	2982	118	451	27	1062
	100.00%	43.45%	34.71%	4.36%	0.18%	1.06%	0.01%	3.13%	56.55%	47.02%	6.12%	0.24%	0.93%	0.06%	2.18%
Occupational	17756	1499	1183	200	14	44	0	58	16257	14975	574	36	384	16	272
	100.00%	8.44%	6.66%	1.13%	0.08%	0.25%	0.00%	0.33%	91.56%	84.34%	3.23%	0.20%	2.16%	0.09%	1.53%
Physical	43075	11234	9552	993	33	244	8	404	31841	28245	1937	78	681	28	872
	100.00%	26.08%	22.18%	2.31%	0.08%	0.57%	0.02%	0.94%	73.92%	65.57%	4.50%	0.18%	1.58%	0.07%	2.02%
Speech	41296	4485	4152	176	22	25	0	110	36811	33908	1863	54	357	28	601
	100.00%	10.86%	10.05%	0.43%	0.05%	0.06%	0.00%	0.27%	89.14%	82.11%	4.51%	0.13%	0.86%	0.07%	1.46%
Therapists, Misc.	43068	13784	10687	2139	109	219	29	601	29284	24987	2982	127	404	32	792
	100.00%	32.01%	24.81%	4.97%	0.25%	0.51%	0.07%	1.40%	67.99%	57.97%	6.88%	0.29%	0.94%	0.07%	1.84%

FIELD: Health Occupations

SOURCE: Minorities and Women in the Health Fields, 1982 Edition, U.S. Dept. of Health and Human Services, Public Health Service, Division of Health Professions Analysis, DHPA Report No. 7-82, October 1981.

TABLE 8-17

PERSONS EMPLOYED IN SELECTED HEALTH OCCUPATIONS BY RACE AND SEX: 1980 1/

Health occupation	Number employed (thousands)								
	All races			White			Black and other racial minorities		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
Physician (M.D. and D.O.)	426	369	57	380	337	43	46	32	14
Dentists	140	134	6	134	128	5	7	6	1
Optometrists	21	20	2/	20	20	2/	2/	2/	2/
Pharmacists	120	89	30	110	84	26	10	5	4
Podiatrists	10	9	1	10	9	1	2/	2/	2/
Veterinarians	36	33	3	36	33	3	2/	2/	2/
Registered nurses	1,302	45	1,257	1,154	36	1,118	148	8	140
Dietitians	59	5	54	44	3	41	15	2	13
Therapists	213	56	157	188	49	139	25	8	18
Health administrators	210	109	101	193	100	93	17	9	8
Clinical laboratory technologists, technicians	234	58	176	201	50	151	33	8	25
Dental hygienists	41	2/	41	41	2/	40	1	2/	1
Medical record technologists, technicians	16	1	15	15	1	13	1	2/	1
Radiologic technologists, technicians	100	30	70	91	25	66	9	5	4
Dental laboratory technicians	52	32	19	45	27	18	7	5	2
Opticians, lens grinders and polishers	43	26	18	42	25	17	1	1	2/
Dental assistants	138	2	136	129	2	127	9	2/	9
Lay midwives	1	2/	1	1	2/	1	2/	2/	2/
Practical nurses	375	11	365	303	8	295	72	3	70
Nursing aides, orderlies and attendants	1,093	136	956	778	84	694	315	53	263

1/ Numbers are estimated annual averages.

2/ Less than 500 persons.

FIELD: Medicine

SOURCE: Women in Engineering, Medicine and Science, by Vera Kistiakowsky, The Conference on Women in Science and Engineering, National Research Council, June 11-12, 1973; and Journal of the American Medical Association, Vol. 234, No. 13, December 1975; Vol. 243, No. 9, March 1980; and Vol. 246, No. 25, December 1981; Vol 248, No. 24, December 24-31, 1982, copyright by AMA

TABLE 8-18

ENROLLMENTS AND GRADUATES IN U.S. MEDICAL SCHOOLS FOR SELECTED YEARS, BY SEX

Year	No. of U.S. Med. Schools	Total Enrollment	Women Students		Total M.D. Grads.	Women Graduates	
			No.	% of Total		No.	% of Total
1914-15	96	14,891	592	4.0	3,536	92	2.6
1924-25	80	18,200	910	5.0	3,974	204	5.1
1934-35	77	22,888	1,077	4.7	5,101	207	4.1
1954-55	81	28,583	1,537	5.4	6,977	345	4.9
1964-65	88	32,428	2,503	7.7	7,409	503	6.8
1974-75	114	53,554	9,661	18.0	12,714	1,706	13.4
1979-80	126	63,800	16,315	25.4	15,135	3,497	23.1
1980-81	126	65,497	17,373	26.5	15,667	3,892	24.8
1981-82	126	66,485	18,555	27.9	15,985	3,991	25.0

SOURCE: Journal of the American Medical Association, Vol. 238, No. 26, December 26, 1977; Vol. 243, No. 9, March 1980; Vol. 246, No. 25, December 25, 1981; Vol. 248, No. 24, December 24/31, 1982; "Medical School Enrollments, 1973-74 through 1977-78", Journal of Medical Education, Vol. 53, April 1978; and personal communications with the Association of American Medical Colleges.

TABLE 8-19

APPLICANTS, FIRST YEAR AND TOTAL ENROLLMENTS AND GRADUATES IN U.S. MEDICAL SCHOOLS BY SEX, 1968-69 - 1981-82

	AP[illegible]TS			FIRST YEAR ENROLLMENT			TOTAL ENROLLMENT			GRADUATES		
	Total	[illegible]	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W
1968-69	21,118	2,097	9.9	9,863	887	9.0	35,833	3,136	8.8	8,059	607	7.5
1969-70	24,465	2,289	9.4	10,401	952	9.2	37,669	3,390	9.0	8,367	700	8.4
1970-71	24,987	2,734	10.9	11,348	1,256	11.1	40,487	3,894	9.6	8,974	827	9.2
1971-72	29,172	3,737	12.8	12,361	1,693	13.7	43,650	4,755	10.9	9,551	860	9.0
1972-73	36,135	5,480	15.2	13,726	2,315	16.9	47,546	6,099	12.8	10,391	924	8.9
1973-74	40,506	7,202	17.8	14,185	2,743	19.6	50,886	7,731	15.4	11,613	1,264	11.1
1974-75	42,624	8,712	20.4	14,963	3,260	22.3	54,074	9,786	18.1	12,714	1,706	13.4
1975-76	42,303	9,575	22.6	15,351	3,656	23.8	56,244	11,527	20.5	13,561	2,200	16.2
1976-77	42,155	10,244	24.3	15,667	3,876	24.7	58,266	13,059	22.4	13,607	2,611	19.2
1977-78	40,569	10,195	25.1	16,136	4,130	25.6	60,039	14,218	23.7	14,393	3,086	21.4
1978-79	36,636	9,561	26.1	16,620	4,184	25.2	62,213	15,293	24.4	14,966	3,445	23.0
1979-80	36,141	10,222	28.3	16,886	4,748	27.9	63,800	16,315	25.4	15,135	3,497	23.1
1980-81	36,100	10,644	29.5	17,204	4,970	28.9	65,497	17,373	26.5	15,667	3,892	24.8
1981-82	36,727	11,673	31.8	17,320	5,343	30.8	66,485	18,555	27.9	15,985	3,991	25.0

SOURCE: Minorities and Women in the Health Fields, Bureau of Health Resources Development, Public Health Service, October, 1978; "Medical Student Enrollment, 1971-72 through 1975-76," Journal of Medical Education, Vol. 51, February 1976, Vol. 52, February 1977, Vol. 53, April 1978, Vol. 54, December 1978, unpublished data 1979 and 1980 from the Association of Americal Medical Colleges; Journal of the American Medical Association, Vol. 246, No. 25, December 25, 1981, Vol. 248, No. 24, December 24-31, 1982, copyright by A.M.A.

TABLE 8-20

FIRST-YEAR ENROLLMENTS IN U. S. SCHOOLS OF MEDICINE BY RACIAL/ETHNIC CATEGORY, 1968-69 THROUGH 1981-82

YEAR	Total First-Year Enrollment	Total U.S. Minority[1]		RACIAL/ETHNIC CATEGORY									
				Black American		American Indian[2]		Mexican Amer/Chicano		Mainland Puerto Rican		American Oriental[3]	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1968-69	9,863	413	4.2	266	2.7	3	*	20	0.2	3	*	121	1.2
1969-70	10,422	641	6.2	440	4.2	7	.1	44	0.4	10	.1	140	1.3
1970-71	11,348	998	8.8	697	6.1	11	.1	73	0.6	27	.2	190	1.7
1971-72	12,361	1,280	10.4	882	7.1	23	.2	118	1.0	40	.3	217	1.8
1972-73	13,677	1,437	10.5	957	7.0	34	.2	137	1.0	44	.3	231	1.7
1973-74	14,159	1,631	11.5	1,027	7.2	44	.3	174	1.2	56	.4	259	1.8
1974-75	14,763	1,839	12.5	1,106	7.5	71	.5	227	1.5	69	.5	275	1.9
1975-76	15,295	1,787	11.7	1,036	6.8	60	.4	224	1.5	71	.5	282	1.8
1976-77	15,613	1,891	12.1	1,040	6.7	43	.3	245	1.6	72	.5	348	2.2
1977-78	16,136	2,146	13.3	1,085	6.7	51	.3	246	1.5	68	.4	395	2.4
1978-79	16,501	2,225	13.4	1,061	6.4	47	.3	260	1.6	75	.5	452	2.7
1979-80	16,930	2,463	14.5	1,108	6.5	63	.4	290	1.7	86	.5	502	3.0
1980-81	17,204	2,290	14.1	932	5.7	59	.4	201	1.3	285	1.8	572	3.5
1981-82	17,320	2,522	15.4	973	5.9	67	.4	262	1.6	332	2.0	674	4.1
1982-83													

TABLE 8-21

TOTAL ENROLLMENTS IN U.S. SCHOOLS OF MEDICINE BY RACIAL/ETHNIC CATEGORY, 1968-69 THROUGH 1981-82

YEAR	Total Enrollment	Total U.S. Minority[1]		RACIAL/ETHNIC CATEGORY									
				Black American		American Indian[2]		Mexican Amer/Chicano		Mainland Puerto Rican		American Oriental[3]	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1968-69	35,833	1,275	3.6	783	2.2	9	*	59	0.2	3	*	421	1.2
1969-70	37,690	1,630	4.3	1,042	2.8	18	*	92	0.2	26	.1	452	1.2
1970-71	40,238	2,294	5.7	1,509	3.8	18	*	148	0.4	48	.1	571	1.4
1971-72	43,650	3,072	7.0	2,055	4.7	42	.1	252	0.6	76	.2	647	1.5
1972-73	47,366	3,918	8.3	2,582	5.5	69	.1	361	0.8	90	.2	718	1.5
1973-74	50,716	4,840	9.5	3,049	6.0	97	.2	496	1.0	123	.2	883	1.7
1974-75	53,554	5,560	10.4	3,355	6.3	159	.3	638	1.2	172	.3	959	1.8
1975-76	55,818	5,928	10.6	3,456	6.2	172	.3	699	1.3	197	.4	1,022	1.8
1976-77	57,765	6,319	10.9	3,517	6.1	186	.3	780	1.4	232	.4	1,177	2.0
1977-78	60,039	7,260	12.1	3,587	6.0	201	.3	831	1.4	261	.4	1,422	2.4
1978-79	62,213	7,596	12.2	3,537	5.7	202	.3	882	1.4	277	.4	1,592	2.6
1979-80	63,800	8,130	12.8	3,627	5.7	212	.3	964	1.5	283	.4	1,777	2.8
1980-81	65,497	8,569	13.3	3,719	5.8	226	.3	957	1.5	329	.5	1,953	3.0
1981-82	66,485	9,303	14.0	3,791	5.8	234	.4	1,002	1.5	1,193	1.8	2,281	3.5
1982-83													

*Less than 0.05 percent
[1]Includes students from other minority groups, not shown separately.
[2]Includes "Alaska Native" category in 1977-78.
[3]Category now called Asian or Pacific Islander in 1977-78.

FIELD: Medicine

SOURCE: Journal of the American Medical Association, Vol. 234, No. 13, Dec. 29, 1975, Vol. 238, No. 26, Dec. 26, 1977, Vol. 240, No. 26, Dec. 22, 1978, Vol. 243, No. 9, March 1980, Vol. 246, No. 25, Dec. 25, 1981 and Vol. 248, No. 24, Dec. 24, 1982. Copyright by the A.M.A.

TABLE 8-22

MINORITY GRADUATES IN MEDICINE, SELECTED YEARS, 1969-70 - 1981-82

		Black		Am. Indian/ Alaskan Nat.		Mexican American		Puerto Rican		Asian/ Pacific Isl.	
	Total No.	No.	%	No.	%	No.	%	No.	%	No.	%
1969-70	8,367	165	2.0	4	0.05	10	0.1	9	0.1		
1972-73	10,391	341	3.3	8	0.08	39	0.4	10	0.1		
1974-75	12,716	638	5.0	22	0.2	110	0.9	28	0.2		
1976-77	13,607	752	5.5	29	0.2	144	1.1	38	0.3		
1977-78	14,393	793	5.5	47	0.3	172	1.2	176	1.2	319	2.2
1978-79	14,966	774	5.2	49	0.3	194	1.3	190	1.3	350	2.4
1980-81	15,667	773	4.9	43	0.3	201	1.3	223	1.4	414	2.7
1981-82	15,985	763	5.0	45	0.3	225	1.4	222	1.4	459	2.9

TABLE 8-23

STUDENTS REPEATING THE ACADEMIC YEAR BY RACIAL/ETHNIC GROUP

	1974-75 Enrolled		1976-77 Enrolled		1977-78 Enrolled		1978-79 Enrolled		1980-81 Enrolled		1981-82 Enrolled	
	Total	Repeat.	Total	Repeat.	Total	Repeat.	Total	Repeat.	Total	Repeat.	Total	Repeat.
FIRST YEAR CLASS												
Black	1,117	161	1,051	116	1,101	142	1,077	155	1,127	195	1,171	198
Mexican American	231	32	263	24	238	22	260	24	259	30	289	27
Puerto Rican	71	7	83	7	231	2	262	12	306	21	353	21
Other Hispanic					174	10	149	8	222	9	229	15
American Indian	72	2	46	5	51	5	47	4	69	10	73	6
Asian/Pacific Isl.					425	7	483	13	583	11	693	19
All Other Students	13,472	162	14,091	174	13,914	225	14,342	241	14,638	288	14,512	324
ALL OTHER CLASSES												
Black	2,279	136	2,519	193	2,550	161	2,533	168	2,592	149	2,620	159
Mexican American	407	33	555	39	599	34	640	31	698	24	713	23
Puerto Rican	97	7	179	7	590	7	642	20	744	15	840	19
Other Hispanic					293	9	336	7	442	6	573	9
American Indian	89	7	145	11	154	8	148	6	157	7	161	5
Asian/Pacific Isl.					1,060	16	1,191	29	1,370	20	1,588	18
All Other Students	36,239	229	38,867	303	39,076	286	40,644	315	42,290	313	42,670	295

SOURCE: Journal of the American Medical Association, Vol. 226, No. 8, November 19, 1973; Vol. 234, No. 13, December 29, 1975; Vol. 238, No. 26, December 26, 1977; Vol. 243, No. 9, March 7, 1980; and Vol. 246, No. 25, December 25, 1981. Copyright by the A.M.A.

TABLE 8-24

WOMEN AND BLACK INTERNS AND RESIDENTS, SEPTEMBER 1, 1972, 1974, 1976, 1978 AND 1980

	INTERNS				RESIDENTS				TOTAL HOUSE STAFF	
	U.S./ Canadian Grads.	Foreign Grads.	Total	%	U.S./ Canadian Grads.	Foreign Grads.	Total	%	No.	%
1972										
Total	7,239	3,924	11,163	100.0	30,610	14,440	45,050	100.0	56,213	100.0
Women	833	906	1,739	15.6	2,319	2,623	4,942	11.0	6,681	11.9
Blacks	202	91	293	2.6	580	341	921	2.0	1,214	2.2
1974										
Total	8,209	3,173	11,382	100.0	33,097	15,064	48,161	100.0	59,543	100.0
Women	1,091	659	1,750	15.4	2,902	2,932	5,834	12.1	7,584	12.7
Blacks	362	59	421	3.7	841	292	1,133	2.3	1,534	2.6
1976										
Total	11,416	2,784	14,200	100.0	31,623	12,149	43,772	100.0	57,972	100.0
Women	401	198	599	4.2	5,112	2,704	7,816	17.9	8,415	14.5
Blacks	-	-	541	3.8	1,447	254	1,701	3.9	2,242	3.9
1978										
Total					50,342	12,821	63,163	100.0		
Women					8,672	3,167	11,839	18.7		
Blacks							2,793	4.8		
1980										
Total					49,741	12,078	61,819	100.0		
Women							13,738	22.2		
Blacks							3,000	4.9		

FIELD: Medicine

SOURCE: Minorities and Women in the Health Fields, 1982 Edition, Health Resources Administration, Public Health Service

TABLE 8-25

COMPARISON OF MINORITY WOMEN FIRST-YEAR AND TOTAL ENROLLMENT IN SCHOOLS OF MEDICINE IN THE UNITED STATES: ACADEMIC YEARS 1971-72, 1975-76, AND 1979-80

Category	1971-72			1975-76			1979-80		
	Men and women in category	Women		Men and women in category	Women		Men and women in category	Women	
		Number	Percent		Number	Percent		Number	Percent
	First-year enrollment								
Total first-year enrollment	12,361	1,693	13.7	15,295	3,647	23.8	16,930	4,713	27.8
First-year minority enrollment	1,280	266	20.8	1,787	585	32.7	2,237	828	37.0
Black	882	200	22.7	1,036	376	36.3	1,108	495	44.7
Mexican American	118	10	8.5	224	46	20.5	290	74	25.5
Mainland Puerto Rican	40	6	15.0	71	24	33.8	96	30	34.9
Other Hispanic	1/	1/	1/	41	9	22.0	188	59	31.4
American Indian	23	8	34.8	60	21	35.0	63	16	25.4
Asian	217	42	19.4	282	86	30.5	502	154	30.7
Other minority	2/	2/	2/	73	23	31.5	2/	2/	2/
	Total enrollment								
Total enrollment	43,650	4,755	10.9	55,818	11,417	20.5	63,800	16,141	25.3
Total minority enrollment	3,072	583	19.0	5,928	1,739	29.3	7,430	2,615	35.2
Black	2,055	420	20.4	3,456	1,157	33.5	3,627	1,549	42.7
Mexican American	252	24	9.5	699	129	18.5	964	229	23.8
Mainland Puerto Rican	76	13	17.1	197	51	25.9	283	104	36.7
Other Hispanic	1/	1/	1/	144	35	24.3	567	160	28.2
American Indian	42	10	23.8	172	45	26.2	212	55	25.9
Asian	647	116	17.9	1,022	256	25.0	1,777	518	29.2
Other minority	2/	2/	2/	238	66	27.7	2/	2/	2/

1/ "Other Hispanic" category not used in 1971-72.

2/ "Other minority" category not used in 1971-72 or 1979-80.

TABLE 8-26

ACTIVE FEDERAL AND NON-FEDERAL WOMEN PHYSICIANS IN THE UNITED STATES AND POSSESSIONS, BY MAJOR PROFESSIONAL ACTIVITY AND SPECIALTY GROUP: DECEMBER 31, 1979

Major professional activity	Specialty group				
	Total	General practice	Medical specialties	Surgical specialties	Other specialties
	Number of active women physicians				
All active women physicians 1/	39,930	4,208	15,863	4,953	14,906
Patient care	35,709	4,072	13,928	4,729	12,980
Office-based practice	16,749	2,529	6,120	2,057	6,043
Hospital-based practice:					
Interns and residents	12,815	1,049	5,653	2,214	3,899
Full-time physician staff	6,145	494	2,155	458	3,038
Other professional activities:					
Medical teaching	982	40	443	74	425
Administration	1,150	56	334	47	703
Research	1,715	12	1,071	81	551
Other	374	28	77	22	247
	Percent female of all active physicians				
All active women physicians 1/	10.1	7.2	13.3	4.6	13.7
Patient care	10.0	7.2	13.5	4.6	13.9
Office-based practice	6.7	5.4	9.1	2.7	10.4
Hospital-based practice					
Interns and residents	19.9	17.5	22.8	12.3	26.2
Full-time physician staff	14.3	12.8	18.4	5.9	15.6
Other professional activities:					
Medical teaching	13.1	12.3	14.7	5.7	14.8
Administration	9.5	7.7	10.4	3.8	10.1
Research	11.8	13.8	12.4	5.4	12.9
Other	13.4	12.3	16.2	7.4	13.8

1/ Excludes 4,361 inactive women physicians. Also excludes 4,303 women physicians not classified as to status or activity and 2,020 with address unknown.

FIELD: Medicine

SOURCE: Minorities and Women in the Health Fields, 1982 Edition, Health Resources Administration, Public Health Service

TABLE 8-27

ACTIVE FEDERAL AND NON-FEDERAL WOMEN PHYSICIANS IN THE UNITED STATES, BY SPECIALTY SELECTED YEARS 1963 THROUGH 1979

Specialty	1963	1970	1976	1979
	Number of active physicians			
All active women physicians 1/	14,957	21,318	28,966	39,930
General practice	3,103	2,486	3,164	4,209
Medical specialties, total	4,560	7,101	10,884	15,863
Allergy	71	117	227	329
Cardiovascular diseases	48	187	182	266
Dermatology	194	278	401	568
Gastroenterology	8	46	46	74
Internal medicine	1,513	2,383	4,482	7,053
Pediatrics 2/	2,605	3,907	5,486	7,572
Pulmonary diseases	121	183	160	211
Surgical specialties, total	1,482	2,129	3,362	4,953
General surgery	187	311	475	1,125
Obstetrics/gynecology	913	1,337	1,897	2,882
Ophthalmology	239	307	436	604
Orthopedic surgery	39	46	69	125
Otolaryngology	55	52	80	119
Plastic surgery	28	40	68	106
Other 3/	21	36	55	92
Other specialties, total	5,812	9,602	11,556	14,906
Anesthesiology	1,027	1,516	1,836	2,276
General preventive medicine	117	100	106	102
Neurology	109	215	382	524
Occupational medicine	64	86	80	113
Pathology 4/	683	1,282	1,748	2,236
Physical medicine/rehabilitation	115	241	330	496
Psychiatry 5/	1,939	2,942	4,042	5,076
Public health	289	564	535	470
Radiology 6/	329	673	1,096	1,593
Other and unspecified	1,150	1,983	2,402	2,020
	Percent female of all active physicians			
All active women physicians 1/	5.7	6.9	8.3	10.1
General practice	4.2	4.3	5.7	7.2
Medical specialties, total	8.1	9.2	11.0	13.3
Allergy	5.3	6.8	8.5	9.5
Cardiovascular diseases	2.8	2.9	2.7	3.1
Dermatology	5.9	6.9	8.5	10.4
Gastroenterology	1.4	2.0	1.9	2.9
Internal medicine	4.4	5.1	7.1	10.1
Pediatrics 2/	18.3	20.8	23.3	27.3
Pulmonary diseases	9.8	7.9	7.2	6.5
Surgical specialties, total	2.1	2.5	3.4	4.6
General surgery	0.7	1.0	1.0	1.4
Obstetrics/gynecology	5.8	7.1	8.5	11.4
Ophthalmology	3.0	3.1	3.8	4.8
Orthopedic surgery	0.6	0.5	0.6	0.9
Otolaryngology	1.1	1.0	1.4	1.9
Plastic surgery	1.8	2.5	2.9	3.4
Other 3/	0.2	0.3	0.4	0.7
Other specialties, total	9.5	10.7	12.3	13.7
Anesthesiology	13.3	14.0	15.9	14.8
General preventive medicine	14.1	12.4	13.1	13.0
Neurology	6.0	7.0	8.6	9.1
Occupational medicine	3.5	3.0	3.4	4.8
Pathology 4/	9.3	12.2	14.4	16.5
Physical medicine/rehabilitation	10.3	16.3	19.1	22.6
Psychiatry 5/	11.7	12.7	14.9	16.9
Public health	16.3	18.6	20.6	20.2
Radiology 6/	3.6	4.0	6.5	8.1
Other and unspecified	8.4	9.8	10.1	11.5

1/ Excludes inactive women physicians. Also excludes women physicians not classified as to status or activity and with address unknown.

2/ Includes pediatric allergy and pediatric cardiology.

3/ Consists of neurological, colon and rectal, thoracic, and urological surgery.

4/ Includes forensic pathology.

5/ Includes child psychiatry.

6/ Includes both diagnostic and therapeutic radiology.

FIELD: Medicine

SOURCE: Minorities and Women in the Health Fields, 1982 Edition, Health Resources Administration, Public Health Service

TABLE 8-28

NUMBER OF FEDERAL PHYSICIANS, BY MAJOR PROFESSIONAL ACTIVITY, SPECIALTY GROUP, AND SEX: DECEMBER 31, 1979

Major professional activity and specialty group	Both sexes	Male	Female	Percent female
Total Federal physicians	18,531	16,835	1,696	9.2
Patient care	15,301	13,823	1,478	9.7
General practice	1,939	1,772	167	8.6
Medical specialties	4,847	4,282	565	11.7
Surgical specialties	3,436	3,324	112	3.3
Other specialties	5,079	4,445	634	12.5
Medical teaching	532	489	43	8.1
Administration	1,413	1,331	82	5.8
Research	1,109	1,044	65	5.9
Other	176	148	28	15.9

TABLE 8-29

WOMEN PHYSICIANS FULL TIME AND PART TIME ON TEACHING STAFFS OF HOSPITALS WITH GRADUATE MEDICAL EDUCATION PROGRAMS: ACADEMIC YEARS 1968-69 THROUGH 1979-80

Academic year	Total	Full time	Part time
1968-69	2,991	1,221	1,770
1969-70	*	*	*
1970-71	4,467	2,069	2,398
1971-72	4,929	2,408	2,521
1972-73	5,166	2,661	2,505
1973-74	4,850	2,223	2,627
1974-75	5,615	2,877	2,738
1975-76	*	*	*
1976-77	6,233	3,372	2,861
1977-78	6,410	3,594	2,816
1978-79	9,162	5,496	3,666
1979-80	9,301	5,589	3,712

* Data were not collected for 1969-70 and 1975-76.

FIELD: Medicine

SOURCE: Bureau of Health Professions, Public Health Service, Unpublished Data

TABLE 8-30

NON-FEDERAL PHYSICIANS IN THE U.S. BY SPECIALTY AND MAJOR PROFESSIONAL ACTIVITY, DEC. 31, 1979

	MAJOR PROFESSIONAL ACTIVITY								
		Patient Care							Other Prof. Activity
				Hospital Based Practice					
	Total Physicians	Total Patient Care	Office Based	Residents	Full-Time Staff	Administration	Medical Teaching	Medical Research	Other
Total Physicians	**454,564**	**356,783**	**249,585**	**64,294**	**42,904**	**12,118**	**7,523**	**14,515**	**2,790**
Federal Physicians	18,531	15,301	654	2,857	11,790	1,413	532	1,109	176
Non-Federal Physicians	427,073	341,482	248,931	61,437	31,114	10,705	6,991	13,406	2,614
Male	380,175	307,251	232,299	48,829	26,123	9,637	6,052	11,756	2,268
Female	46,898	34,231	16,632	12,608	4,991	1,068	939	1,650	346
General Practice	56,101	54,826	46,718	5,703	2,405	657	313	84	221
Male	52,063	50,921	44,222	4,670	2,029	603	274	72	193
Female	4,038	3,905	2,496	1,033	376	54	39	12	28
Medical Specialists	112,658	98,626	66,805	23,928	7,893	2,872	2,766	7,954	440
Male	97,454	85,263	60,738	18,363	6,162	2,552	2,345	6,924	370
Female	15,204	13,363	6,067	5,565	1,731	320	421	1,030	70
Surgical Specialists	103,792	99,868	77,398	17,130	5,340	1,051	1,191	1,402	280
Male	98,965	95,251	75,345	14,951	4,955	1,010	1,120	1,324	260
Female	4,827	4,617	2,053	2,179	385	41	71	78	20
Other Specialists	102,647	88,162	58,010	14,676	15,476	6,125	2,721	3,966	1,673
Male	88,482	75,816	51,994	10,845	12,977	5,472	2,313	3,436	1,445
Female	14,165	12,346	6,016	3,831	2,499	653	408	530	228

FIELD: Medicine

SOURCE: Journal of the American Medical Association, Vol. 246, No. 25, 25 December 1981, Copyright 1981 by the AMA

TABLE 8-31

PHYSICIANS SERVING IN RESIDENCIES BY SPECIALTY AND SEX, 1978, 1979, 1980

SPECIALTY	1978			1979			1980		
	Total	Women	% W	Total	Women	% W	Total	Women	% W
Allergy & Immunology	120	24	20.0	155	24	15.5	192	31	16.1
Anaesthesiology	2,378	456	19.2	2,491	494	19.8	2,490	600	24.1
Colon & Rectal Surgery	39	1	2.6	42	1	2.4	37	1	2.7
Dermatology	800	144	18.0	801	163	20.3	755	202	26.8
Dermatopathology	17	2	11.8	19	0	0.0	30	5	16.7
Family Practice	6,000	932	15.5	6,352	1,095	17.2	6,344	1,235	19.5
Internal Medicine	16,178	2,660	16.4	16,580	2,879	17.4	15,964	3,342	20.9
Neurological Surgery	560	16	2.9	579	23	4.0	511	24	4.7
Neurology	1,194	174	14.6	1,212	167	13.8	1,114	191	17.1
Nuclear Medicine	157	27	17.2	174	27	15.5	176	26	14.8
Obstetrics-Gynecology	4,448	1,038	23.3	4,496	1,144	25.4	4,221	1,279	30.3
Ophthamology	1,561	200	12.8	1,538	185	12.0	1,480	185	12.5
Orthopedic Surgery	2,482	70	2.8	2,572	72	2.8	2,418	89	3.7
Otolaryngology	951	56	5.9	1,038	68	6.6	923	80	8.7
Pathology	2,564	825	32.2	2,519	749	29.7	2,186	691	31.6
Blood Banking	17	8	47.1	21	6	28.6	23	9	39.1
Forensic Pathology	24	3	12.5	24	6	25.0	22	3	13.6
Neuropathology	39	7	17.9	52	12	23.1	52	11	21.2
Pediatrics	5,331	2,206	41.4	5,603	2,324	41.5	5,171	2,432	47.0
Pediatric Allergy	56	10	17.9	53	12	22.6	2	1	50.0
Pediatric Cardiology	117	31	26.5	128	27	21.1	130	21	16.2
Physical Med. & Rehabilitation	436	167	38.3	490	199	40.6	492	209	42.5
Plastic Surgery	406	21	5.2	412	30	7.3	367	33	9.0
Preventive Medicine, General	166	36	21.7	199	29	14.6	157	31	19.7
Aerospace Medicine	16	0	0.0	25	1	4.0	25	1	4.0
Occupational Medicine	55	16	29.1	70	12	17.1	71	16	22.5
Public Health	26	6	23.1	23	6	26.1	31	11	35.5
Psychiatry	4,056	1,282	31.6	3,901	1,231	31.6	3,911	1,416	36.2
Child Psychiatry	552	198	35.9	521	189	36.3	426	185	43.4
Radiology, Diagnostic	2,802	424	15.1	3,024	477	15.8	2,766	531	19.2
Radiology, Diagnostic (Nuclear)	56	10	17.9	45	6	13.3	48	12	25.0
Radiology, Therapeutic	385	115	29.9	377	92	24.4	288	78	27.1
Surgery	7,792	647	8.3	7,689	650	8.5	7,794	723	9.3
Pediatric Surgery	24	1	4.2	37	5	13.5	29	5	17.2
Thoracic Surgery	294	6	2.0	276	6	2.2	256	8	3.1
Urology	1,064	20	1.9	1,077	20	1.9	917	21	2.3
TOTAL	63,163	11,839	18.7	64,615	12,431	19.2	61,819	13,738	22.2

FIELD: Medicine

SOURCE: Journal of the American Medical Association, Vol. 226, No. 8, 1973; Vol. 234, No. 13, December 29, 1975; Vol. 238, No. 26, December 26, 1977; Vol. 240, No. 26, December 20, 1978; Vol. 243, No. 9, Mar. 7, 1980, copyright by American Medican Association

TABLE 8-32

BLACK U.S. CITIZENS SERVING IN RESIDENCIES BY SPECIALTY AS OF SEPTEMBER 1, SELECTED YEARS, 1972 - 1980

SPECIALTY	U.S. & Canadian Graduates				Foreign. Med. Sch. Graduates				Total Graduates		
	1972	1974	1976	1977	1972	1974	1976	1977	1978	1979	1980
Allergy and Immunology				1			1		4	4	4
Anesthesiology	13	10	21	20	37	15	21	20	95	79	97
Child Psychiatry	5	8	5		3	2	3		19	20	12
Diagnostic Radiology	1	1	6				1		88	62	92
Dermatology	12	13	14	6	3		1		24	30	45
Family Practice	12	45	122	133	4	5	9	10	336		
General Practice	2	1			8	1	23				
General Surgery	92	120	180	161	35	27	16	23	385	342	333
Internal Medicine	115	185	368	345	41	70	39	34	631	772	752
Neurological Surgery	10	8	16	20	4	1		5	32	26	39
Neurology	4	9	11		5	13	10		21	21	27
Nuclear Medicine			2	1		1	2	2	8	6	6
Obstetrics/Gynecology	101	127	230	228	25	27	5	14	390	363	385
Ophthalmology	29	28	57	43	4	4	2		66	54	48
Orthopedic Surgery	41	41	45	36	4	3	8	12	88	81	94
Otolaryngology	7	13	24	20		4	1	6	44	44	38
Pathology	18	16	28	23	18	18	12	16	56	95	74
Pediatrics	36	62	145	123	32	27	26	28	274	386	341
Pediatric Allergy		1			6	1	3		3	3	0
Physical Medicine & Rehabilitation	2	3	1	4	9	1	8	7	7	14	13
Plastic Surgery	1	2		4	1	1	2	3	10	13	11
Colon and Rectal Surgery					1		2		2	0	2
Psychiatry	52	56	94	93	8	32	32	61	169	161	197
Radiology	45	25	38	30	10	8	9	12		0	0
Surgery									385	342	333
Therapeutic Radiology	2	2	3			8	5		12	9	4
Thoracic Surgery	7	4	3	4	5	11	3	7	13	10	10
Urology	14	19	12	17	4	2	9	7	43	42	60
Other Specialties	20	22	22	18	13	9	1	31	18	24	36
TOTAL	641	821	1,447	1,330	280	293	254	298	2,793	2,944	3,000

FIELD: Osteopathy

SOURCE: Minorities and Women in the Health Fields, Bureau of Health Resources Development, Public Health Service, May 1974, and Women in Health Careers, by Maryland Pennell, Shirlene Showell, the American Public Health Association, DHEW No. (HRA) 75-55, June 1975, p. 74, and American Association of Colleges of Osteopathic Medicine, Annual Statistical Report 1981, 1982 and 1983

TABLE 8-33

FIRST YEAR & TOTAL ENROLLMENTS AND GRADUATES IN SCHOOLS OF OSTEOPATHIC MEDICINE IN THE U.S., BY SEX, 1968-69 - 1979-82

	First Year Enrollment			Total Enrollment			Graduates		
YEAR	Total	Women	% W	Total	Women	% W	Total	Women	% W
1968-69	521	21	4.0	1,879	53	2.8	427	8	1.9
1969-70	577	14	2.4	1,997	59	3.0	432	12	2.8
1970-71	623	17	2.7	2,151	61	2.8	472	11	2.3
1971-72	670	29	4.3	2,304	79	3.4	485	18	3.7
1972-73	810	56	6.9	2,579	116	4.5	649	18	2.8
1973-74	884	83	9.3	2,780	181	6.5	594	17	2.9
1974-75	974	106	10.9	3,139	267	8.5	702	44	6.3
1975-76	1,038	140	13.5	3,443	362	10.5	809	58	7.2
1976-77	1,088	179	16.5	3,671	472	12.9	908	84	9.3
1977-78	1,163	192	16.5	3,926	570	14.8	971	68	7.0
1978-79	1,322	222	16.8	4,221	688	16.3	1,004	163	16.2
1979-80	1,426	265	18.6	4,571	789	17.3	1,059	192	18.1
1980-81	1,496	329	22.0	4,940	971	19.7	1,151	202	17.6
1981-82	1,582	378	23.9	5,304	1,108	20.9	1,017	186	18.3

TABLE 8-34

FIRST YEAR AND TOTAL ENROLLMENTS IN U.S. OSTEOPATHIC COLLEGES BY MINORITY GROUP, 1978-79 - 1979-82

	1978-79		1979-80		1980-81		1981-82	
MINORITY GROUP	NO.	%	NO.	%	NO.	%	NO.	%
First Year Enrollment	**1,322**	**100.0**	**1,426**	**100.0**	**1,496**	**100.0**	**1,582**	**100.0**
Black American	31	2.4	40	2.8	43	2.9	37	2.3
American Indian	10	0.7	6	0.4	8	0.5	12	0.8
Hispanic	17	1.3	18	1.3	18	1.2	22	1.4
Asian Am./Pacific Isl.	16	1.2	30	2.1	30	2.0	33	2.1
First Year Minority Total	**74**	**5.7**	**93**	**6.5**	**99**	**6.6**	**104**	**6.6**
Total Enrollment	**4,221**	**100.0**	**4,571**	**100.0**	**4,940**	**100.0**	**5,304**	**100.0**
Black American	46	2.2	100	2.2	94	1.9	104	2.0
American Indian	24	0.6	26	0.6	19	0.4	26	0.5
Hispanic	11	0.8	45	1.0	52	1.1	62	1.2
Oriental American	45	1.0	70	1.5	87	1.8	109	2.1
Total Minority Enrollment	**192**	**4.5**	**241**	**5.3**	**252**	**5.1**	**301**	**5.7**

FIELD: Dentistry

SOURCE: Women's Participation in First-Professional Degree Programs in Medicine, Dentistry, Veterinary Medicine, and Law, 1969-70 through 1974-75, NCES 76-023; Annual Report Dental Education Series, 1975-76 through 1981-82, American Dental Association; and Personal Communication with the American Association of Dental Schools, January 8, 1982, April 11, 1983

TABLE 8-35

APPLICATIONS, ENROLLMENTS, GRADUATES, U.S. DENTAL SCHOOLS, BY SEX, 1968-69 - 1982-83

	APPLICANTS			FIRST-YEAR ENROLLMENT			TOTAL ENROLLMENT			GRADUATES		
	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W
1968-69				4,203	38	0.9	15,408	167	1.1		36	1.1
1969-70	10,325	120	1.2	4,354	69	1.6	16,136	227	1.4	3,748	36	1.0
1970-71	10,410	160	1.5	4,639	103	2.2	16,510	274	1.7	3,777	46	1.2
1971-72	11,102	302	2.7	5,103	160	3.1	17,433	355	2.0	3,894	46	1.2
1972-73	13,478	506	3.8	6,010	241	4.0	17,774	556	3.1	4,086	58	1.4
1973-74	14,820	727	4.9	6,123	423	6.9	19,215	892	4.6	4,478	88	2.0
1974-75	14,850	1,193	8.0	5,828	638	10.9	20,163	1,403	7.0	4,513	92	2.0
1975-76	15,734	*		5,763	707	12.3	20,767	1,861	9.0	4,969	156	3.1
1976-77	14,807	*		5,935	802	13.5	21,013	2,349	11.1	5,336	248	4.6
1977-78	12,835	*		5,954	880	14.8	21,510	2,796	13.0	5,177	369	7.1
1978-79	11,753	*		6,301	1,000	15.9	22,179	3,112	14.0	5,324	634	11.9
1979-80	10,520	*		6,132	1,076	17.5	22,482	3,482	15.5	5,424	634	11.7
1980-81	9,648	1,960	20.3	6,030	1,194	19.8	22,842	3,879	17.0	5,256	715	13.6
1981-82	8,852	1,861	21.0	5,855	1,268	21.7	22,621	4,227	18.7	5,550	825	14.9
1982-83	7,724	1,722	22.3	5,498	1,223	22.2	22,235	4,457	20.0	5,371	838	15.6

* Not available.

SOURCE: Minorities and Women in the Health Fields, U.S. Department of HEW, Public Health Service, Health Resources Administration, DHEW Pub. No. (HRA) 76-22, September 1975; Minority Report 1977-78, Supplement 3 to the Annual Report 1977-78 Dental Education, American Dental Association, February 1978; and Annual Report on Dental Education 1981-82, American Dental Association.

TABLE 8-36

FIRST YEAR AND TOTAL ENROLLMENTS IN U.S. DENTAL SCHOOLS BY MINORITY GROUP, SELECTED YEARS, 1972-73 - 1981-82

MINORITY GROUP	1972-73		1977-78		1980-81		1981-82	
	No.	%	No.	%	No.	%	No.	%
FIRST YEAR ENROLLMENT	**5,287**	**100.0**	**5,954**	**100.0**	**6,030**	**100.0**	**5,855**	**100.0**
Black	266	5.0	296	5.0	283	4.7	299	5.1
American Indian	5	0.1	10	0.1			21	0.4
Hispanic	56	1.1	110	1.8	160	2.6	183	3.1
Asian	138	2.6	225	3.8	317	5.3	373	6.4
Other	10	0.2						
FIRST YEAR MINORITY TOTAL	**475**	**9.0**	**641**	**10.8**	**772**	**12.8**	**876**	**15.0**
TOTAL ENROLLMENT	**18,209**	**100.0**	**21,510**	**100.0**	**22,842**	**100.0**	**22,621**	**100.0**
Black	765	4.2	968	4.5	1,022	4.5	999	4.4
American Indian	14	0.1	59	0.2	53	0.2	61	0.3
Hispanic	133	0.7	390	1.8	519	2.3	583	2.6
Asian	409	2.2	743	3.4	1,040	4.5	1,196	5.3
Other	51	0.3						
TOTAL MINORITY ENROLLMENT	**1,371**	**7.5**	**2,160**	**10.1**	**2,634**	**11.5**	**2,839**	**12.6**

FIELD: Dentistry

SOURCE: Minorities and Women in the Health Fields, Bureau of Health Resources Development, Public Health Service, May 1974, and Annual Report Dental Education Series, 1973-74 Through 1981-82, American Dental Association.

TABLE 8-37

GRADUATES OF SCHOOLS OF DENTISTRY IN THE UNITED STATES, BY RACIAL/ETHNIC CATEGORY: 1970-71 THROUGH 1981-82

Academic Year	Total Graduates	RACIAL/ETHNIC CATEGORY													
		Total Minority		Black		American Indian		Hispanic		Oriental		Other Minority		White	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1970-71	3,598[1]	137	3.8	53	1.5	1	[4]	9	0.3	62	1.7	12	0.3	3,461	96.2
1971-72[2]	3,689[1]	167[3]	4.5	74	2.0	1	[4]	12	0.3	61	1.7	19	0.5	3,522	95.5
1972-73	4,191[1]	241	5.8	110	2.6	1	[4]	25	0.6	73	1.7	32	0.8	3,950	94.2
1973-74	4,479	335	7.5	154	3.4	2	0.4	31	0.7	113	2.5	35	0.8	4,144	92.5
1974-75	4,933	368	7.5	187	3.8	5	0.1	33	0.7	107	2.2	30	0.6	4,565	92.5
1975-76	5,282	467	8.8	213	4.0	3	0.1	50	0.9	157	3.0	44	0.8	4,815	91.2
1977-78	5,177	461	8.9	215	4.2	15	0.2	69[5]	1.3	162	3.1	-	-	4,716	91.1
1978-79	5,368	485	9.0	182	3.4	18	0.3	77	1.4	208	3.9	-	-	4,833	91.0
1980-81	5,256	520	9.9	190	3.7	14	0.3	119	2.3	197	3.7			4,736	90.1
1981-82	5,550	564	10.2	214	3.9	14	0.3	90	1.6	246	4.4			4,986	89.8
1982-83															

[1] Excludes University of Puerto Rico and two schools which did not report racial/ethnic data on graduates in 1970-71 and 1971-72.
[2] Minority data concern only U.S. citizens; non-citizen minority graduates are included with white graduates.
[3] Includes non-citizen minority graduates from Howard University.
[4] Less than 0.05 percent.
[5] Category now called Hispanic - includes Mexican American, Spanish American and Puerto Rican.

FIELD: Dentistry

SOURCE: Supply and Characteristics of Selected Health Personnel, U.S. Department of Health and Human Services, HDDS-HRA 81-20

TABLE 8-38

NUMBER OF DENTISTS BY PRIMARY OCCUPATION AND SEX, 12/31/80

PRIMARY OCCUPATION	TOTAL	WOMEN	% WOMEN
Practicing Dentists (more than 30 hours per week	97,220	1,770	1.8
Practicing Dentists (less than 30 hours per week	12,160	620	5.1
Dental School Faculty/Staff Member	3,440	240	7.0
Armed Forces Dentist	5,000	120	2.4
Dentists Employed by Federal, State and Local Governments	3,490	270	7.7
Hospital Staff Dentist	970	40	4.1
Intern/Resident/Student	3,570	410	11.5
Health/Dental Organization Staff Member	390	30	7.7
U.S. Total	126,240	3,500	2.8

SOURCE: Third Report to the President & Congress on the Status of Health Professions Personnel in the United States, January 1982, U.S. Department of Health and Human Services, Health Resources Administration

TABLE 8-39

NUMBER AND DISTRIBUTION OF ACTIVE DENTISTS BY SPECIALTY AND SEX, December 31, 1980

	All Dental Specialists		Male		Female		
	Number	Percent Distribution	Number	Percent Distribution	Number	Percent Distribution	% Female of Active Dental Specialists
All Specialists	**17,160**	**100.0**	**16,988**	**100.0**	**172**	**100.0**	**1.0**
Orthodontists	6,563	38.2	6,509	38.3	54	31.4	0.8
Oral Surgeons	3,960	23.1	3,954	23.3	6	3.5	0.2
Periodontists	2,242	13.1	2,212	13.0	30	17.4	1.3
Pedodontists	2,063	12.0	1,998	11.8	65	37.8	3.2
Endodontists	1,174	6.8	1,169	6.9	5	2.9	0.4
Prosthodontists	949	5.6	942	5.5	7	4.1	0.7
Public Health Dentists	110	0.6	107	0.6	3	1.7	2.7
Oral Pathologists	99	0.6	97	0.6	2	1.2	2.0

FIELD: Dentistry

SOURCE: Minorities and Women in the Health Fields, 1982 Edition, U.S. Dept. of Health and Human Services, Public Health Service, Health Resources Administration, DHPA Report No. 7-82, October 1981; and American Dental Assn, Council on Dental Education, Dental Faculty Information; Supplement to the Annual Report on Dental Education, 1980-81; also prior supplementary report for 1975-76.

TABLE 8-40

TEACHING FACULTY IN SCHOOLS OF DENTISTRY IN THE U.S. BY RACE/ETHNICITY AND SEX: 1975-76 and 1980-81

Racial/ethnic category	Both sexes	Male	Female	Percent female	Minority percent distribution (both sexes)
			1975-76		
Total faculty 1/	11,150	10,316	834	7.5	100.0
Total minority faculty	674	593	81	12.0	6.0
Black	297	266	31	10.4	2.7
Hispanic	45	41	4	8.9	0.4
American Indian	5	5	-	-	2/
Asian	191	162	29	15.2	1.7
Other minority	136	119	17	12.5	1.2
			1980-81		
Total faculty 1/	12,650	11,714	936	7.4	100.0
Total minority faculty 3/	978	824	154	15.7	7.7
Black	398	336	62	15.6	3.1
Hispanic	125	98	27	21.6	1.0
American Indian	9	9	-	-	0.1
Asian	446	381	65	14.6	3.5

1/ Includes both full-time and part-time faculty for basic science and clinical subjects.

2/ Percent is less than 0.05

3/ The category "Other minority" was not in use in 1980-81.

FIELD: Veterinary Medicine

SOURCE: Women's Participation in First Professional Degree Programs in Medicine, Dentistry, Veterinary Medicine and Law, 1969-70 - 1974-75, NCES 76-023; Digest of Educational Statistics 1979; Personal Communication, American Veterinary Medicine Association, November 7, 1980, January 15, 1982, and April 11, 1983

TABLE 8-41

ENROLLMENTS AND GRADUATES IN U.S. SCHOOLS OF VETERINARY MEDICINE BY SEX, 1968-69 - 1982-83

YEAR	FIRST YEAR ENROLLMENT			TOTAL ENROLLMENT			GRADUATES		
	Total	Women	% W	Total	Women	% W	Total	Women	% W
1968-69	1,327	120	9.0	4,779	362	7.6	1,006	56	5.6
1969-70	1,386	159	11.5	4,726	417	8.8	1,206	90	7.5
1970-71	1,439	158	11.0	4,716	444	9.4	1,252	98	7.8
1971-72	1,509	228	15.1	5,163	593	11.5	1,247	117	9.4
1972-73	1,760	327	18.6	5,439	745	13.7	1,299	133	10.2
1973-74	1,520	350	23.0	5,528	957	17.3	1,384	155	11.2
1974-75	1,792	453	25.3	5,985	1,220	20.4	1,415	225	15.9
1975-76	1,807	618	34.2	6,274	1,719	27.4	1,532	277	18.1
1976-77	1,856	598	32.2	6,571	1,805	27.5	1,586	362	22.8
1977-78	1,873	706	37.7	6,903	2,129	30.8	1,635	409	25.0
1978-79	2,086	766	36.7	7,312	2,471	33.8	1,704	499	29.3
1979-80	1,747	711	40.7	7,007	2,570	36.7	1,852	615	33.2
1980-81	2,237	987	44.1	8,154	3,220	39.4	1,9[illegible]	702	36.3
1981-82	2,313	1,100	47.5	8,499	3,576	42.0	[illegible],686	668	35.4
1982-83	2,247	1,124	50.0	8,682	4,028	46.4			

SOURCE: Personal Communication, Association of American Veterinary Medical Colleges, Jan. 15, 1982 and April 11, 1983

TABLE 8-42

ENROLLMENTS IN U.S. SCHOOLS OF VETERINARY MEDICINE BY SEX AND MINORITY, 1977-78 - 1982-83

	1977-78				1979-80				1980-81				1982-83			
	Total	Women	% W	% M	Total	Women	% W	% M	Total	Women	% W	% M	Total	Women	% W	% M
First Year Enrollment																
Total	1,873	706	37.7	4.3	1,747	711	40.7	2.2	2,237	987	44.1	5.1	2,247	1,124	50.0	5.3
Minority	80	39			37	18			115	56			120	70		
Total Enrollment																
Total	6,903	2,129	30.8	3.8	7,007	2,570	36.7	4.4	8,154	3,220	39.4	N.A.	8,682	4,028	46.4	N.A.
Minority	261	109			307	146			N.A.	N.A.			N.A.	N.A.		N.A.

TABLE 8-43

VETERINARIANS BY SEX, 1982

	Total	Women	% W
Members of the AMVA	33,807	3,801	11.24
Retired Members of the AMVA	3,801	10	0.26
Estimate of Professionally Active Veterinarians	37,507	4,739	12.6

FIELD: Optometry

SOURCE: Minorities and Women in the Health Fields, Bureau of Health Resources Development, Public Health Service, May 1974 and Women in Health Careers, by Maryland Pennell and Shirlene Showell, Health Resources Administration, U.S. Department of HEW, HRA 75-55, June 1975; data from the Association of Schools and Colleges of Optometry; and survey conducted by Council on Optometric Education, American Optometric Association

TABLE 8-44

TOTAL ENROLLMENTS AND GRADUATES OF OPTOMETRY BY SEX, ACADEMIC YEARS 1969-70 THROUGH 1981-82

	NUMBER OF STUDENTS					GRADUATES*		
	Total	Men	% Men	Women	% Women	Total	Women	% Women
1969-70	2,488	2,415	97.1	73	2.9	444	23	5.2
1970-71	2,831	2,749	97.1	82	2.9	530	12	2.3
1971-72	3,097	2,985	96.4	112	3.6	684	18	2.6
1972-73	3.328	3,158	94.9	170	5.1	692	17	2.5
1973-74	3,529	3,268	92.7	261	7.3	793	34	4.3
1974-75	3,679	3,328	90.5	351	9.5	809	39	4.8
1975-76	3,888	3,432	88.3	456	11.7	906	72	7.9
1976-77	4,033	3,491	86.6	542	13.4	923	103	11.2
1977-78	4,440	3,741	84.3	699	15.7	978	126	12.9
1978-79	4,436	3,679	82.9	757	17.1	916	140	15.3
1979-80	4,500	3,632	80.7	868	19.3	1,073	166	15.5
1980-81	4,540	3,555	78.3	985	21.7	1,096	204	18.6
1981-82	4,541	3,464	76.3	1,077	23.7	1,113	224	20.1
1982-83								

* From 1974-75, this figure total is the same as 4th year student enrollment.

TABLE 8-45

ENROLLMENTS IN U.S. SCHOOLS OF OPTOMETRY BY ETHNIC STATUS 1973-74 THRU 1981-82

	TOTAL		BLACK		SPANISH/ SURNAMED		NATIVE AMERICAN INDIAN		ASIAN AMERICAN		WHITE AND ALL OTHERS	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1973-74	3,529	100.00	52	1.47	39	1.11	5	0.14	141	4.00	3,292	93.28
1974-75	3,679	100.00	73	1.98	45	1.22	8	0.22	153	4.16	3,400	92.42
1975-76	3,888	100.00	83	2.13	55	1.41	5	0.13	166	4.27	3,579	92.05
1976-77	4,033	100.00	89	2.21	46	1.14	6	0.15	157	3.89	3,735	92.61
1977-78	4,440	100.00	79	1.78	55	1.24	7	0.16	153	3.45	4,146	93.38
1978-79	4,436	100.00	62	1.39	66	1.49	11	0.25	166	3.74	4,131	93.12
1979-80	4,500	100.00	56	1.24	67	1.49	13	0.29	208	4.62	4,156	92.36
1980-81	4,540	100.00	57	1.26	80	1.76	12	0.26	243	5.35	4,148	90.48
1981-82	4,541	100.00	57	1.26	98	2.16	9	0.20	283	6.23	4,094	90.16
Men	3,464	76.28	29	0.64	72	1.59	6	0.13	181	3.99	3,176	69.94
Women	1,077	23.72	28	0.62	26	0.57	3	0.07	102	2.25	918	20.22

FIELD: Pharmacy

SOURCE: Earned Degrees Conferred Series, 1968-69 Through 1980-81, U.S. Office of Education, (NCES)

TABLE 8-46

DEGREES CONFERRED IN PHARMACY BY LEVEL AND SEX, 1968-69 - 1981

YEAR	BACHELOR'S			MASTER'S			DOCTORATE		
	Total	Women	% Women	Total	Women	% Women	Total	Women	% Women
1968-69	4,172	692	16.6	232	33	14.2	74	4	5.4
1969-70	4,543	853	18.8	229	38	16.6	79	11	13.9
1970-71	4,593	951	20.7	194	40	20.6	94	1	1.1
1971-72	4,668	1,088	23.3	221	49	22.2	101	8	7.9
1972-73	5,079	1,277	25.1	167	36	21.6	296	75	25.3
1973-74	5,773	1,560	27.0	240	44	18.3	132	16	12.1
1974-75	6,487	1,821	28.1	285	75	26.3	206	46	22.3
1975-76	7,018	2,137	30.5	307	60	19.5	81	8	9.9
1976-77	7,495	2,434	32.5	274	72	26.3	75	10	13.3
1977-78	7,468	2,712	36.3	320	91	28.4	96	13	13.5
1978-79	6,919	2,759	39.9	330	89	27.0	104	23	22.1
1979-80	7,122	2,919	41.0	380	117	30.8	89	16	18.0
1980-81	6,640	2,910	43.8	336	120	35.7	108	17	15.7
TOTAL	77,977	24,113	30.9	3,515	864	24.6	1,535	248	16.2

SOURCE: The Status of Women in Pharmaceutical Education, by Christopher A. Rodowskas, Jr., American Association of Colleges of Pharmacy

Doctorate Recipients from United States Universities, Summary Reports 1972-1981, National Research Council

TABLE 8-47

DOCTORAL RECIPIENTS IN THE PHARMACEUTICAL SCIENCES BY SEX, 1920-1981

YEAR OF DOCTORATE		PHARMACY		PHARMACOLOGY			PHARMACEUTICAL CHEMISTRY		
	Total	Women	% Women	Total	Women	% Women	Total	Women	% Women
1920-29	11	1	9.1	22	2	11.0	5	0	0.0
1930-39	22	1	4.5	93	10	10.8	27	2	7.4
1940-49	18	1	5.5	190	7	3.7	47	4	8.5
1950-59	263	15	5.7	466	45	9.7	194	2	1.0
1960-69	366	21	5.7	958	98	10.2	471	18	3.8
1970-71	115	6	5.2	323	38	11.8	122	9	7.4
1971-72	57	2	3.5	187	23	12.3	48	8	16.7
1972-73	72	1	1.4	160	27	16.9	50	6	12.0
1973-74	61	5	8.2	178	35	19.7	62	6	9.7
1974-75	70	7	10.0	166	26	15.7	66	9	13.6
1975-76	63	9	14.3	205	25	12.2	55	9	16.4
1976-77	49	6	12.2	196	42	21.4	50	5	10.0
1977-78	61	9	14.8	198	12	6.1	51	5	9.8
1978-79	69	15	21.7	217	33	15.2	43	6	14.0
1979-80	70	9	12.9	257	60	23.3	52	15	28.8
1980-81	69	11	15.9	280	69	24.6	52	5	9.6
TOTAL	1,436	119	8.3	3,896	552	14.2	1,395	109	7.8

FIELD: Pharmacy

SOURCE: "Report of Degrees Conferred by Schools and Colleges of Pharmacy for the Academic Year 1975-76," by Lars Solander, reprinted from the American Journal of Pharmaceutical Education, Vol. 40, December 1976; Degrees Conferred by Schools and Colleges of Pharmacy for the Academic Year 1978-79 by Lars Solander; Degrees Conferred by Schools and Colleges of Pharmacy for the Academic Year 1979-80 by Stuart M. Speedie, Ph.D., and Degrees Conferred by Schools and Colleges of Pharmacy 1981-82 by Steven H. Chesin, American Association of Colleges of Pharmacy

TABLE 8-48

NUMBER AND PERCENT OF PHARMACY GRADUATES BY TYPE OF DEGREE, ETHNIC GROUP AND SEX, 1975-76, 1979-80 AND 1981-82

ETHNIC GROUP AND SEX	TYPE OF DEGREE								
	Bachelor of Science and Bachelor of Pharmacy			Master of Science			Doctor of Pharmacy and Doctor of Philosophy		
	1975-76	1979-80[1]	1981-82	1975-76	1979-80[2]	1981-82	1975-76	1979-80[3]	1981-82
White American	6,191	6,054	5,561	279	296	282	498	465	550
Male	4,409	3,711	2,996	220	219	189	366	319	342
Female	1,782	2,343	2,565	59	77	93	132	146	208
% White	88.9	89.1	86.2	71.2	70.8	61.6	60.2	70.9	68.8
Black American	183	238	238	6	10	5	22	16	19
Male	107	104	86	5	5	2	8	11	11
Female	76	134	152	1	5	3	14	5	8
% Black	2.6	3.5	3.7	1.5	2.4	1.1	2.7	2.4	2.4
Spanish American	101	109	224	4	3	6	17	16	21
Male	64	54	80	2	1	2	14	13	9
Female	37	55	144	2	2	4	3	3	12
% Spanish American	1.4	1.6	3.5	1.0	0.7	1.3	2.1	2.4	2.6
Native American	11	5	12	0	0	1	0	2	1
Male	9	4	6	0	0	1	0	2	1
Female	2	1	6	0	0	0	0	0	0
% Native American	0.2	0.1	0.2	0.0	0.0	0.2	0.0	0.3	0.1
Asian American	149	172	198	24	27	6	218	80	131
Male	89	94	102	18	11	2	121	49	66
Female	60	78	96	6	16	4	97	31	65
% Asian American	2.1	2.5	3.1	6.1	6.5	1.3	26.4	12.2	16.4
Other American	35	9	18	6	4	6	4	1	1
Male	31	4	12	6	1	2	3	1	1
Female	4	5	6	0	3	4	1	0	0
% Other	0.5	0.1	0.3	1.5	1.0	1.3	0.5	0.2	.1
Non-American	294	211	197	73	78	131	68	76	77
Male	197	137	133	49	48	87	55	52	52
Female	97	74	66	24	30	44	13	24	25
% Non-American	4.2	3.1	3.1	18.6	18.7	28.6	8.2	11.6	9.6
TOTAL	6,964	6,798	6,448	392	418	458	827	656	800
Male	4,906	4,108	3,417	300	285	293	567	447	482
Female	2,058	2,690	3,013	92	133	165	260	209	318
% Female	29.6	39.6	46.7	23.5	31.8	36.0	31.4	31.9	39.8

[1] Does not include Oregon State. [2] Does not include Northeastern and Oregon. [3] Does not include Arkansas and Northeastern.

FIELD: Pharmacy

SOURCE: Report on Enrollment in Schools and Colleges of Pharmacy, 1973-74 and Graduate Enrollment Data, October 1973 and Fall 1977; Graduate Study in Member Colleges, 1974-75; Enrollment Report on Professional Degree Programs in Pharmacy, Fall 1976, 1978, 1979, 1980, 1981 and 1982; Report of Degrees Conferred by Schools & Colleges of Pharmacy, 1975-76, 1978-79, 1979-80, and 1981-82, American Association of Colleges of Pharmacy; prior annual reports; Women in Health Careers, Health Resources Administration, U.S. Dept. HEW, June 1975

TABLE 8-49

TOTAL ENROLLMENTS IN THE LAST THREE YEARS IN U.S. SCHOOLS OF PHARMACY BY SEX 1968-69 THRU 1980-81 AND GRADUATES IN PHARMACY BY SEX, 1968-69 THRU 1982-83

ACADEMIC YEAR					BACHELOR'S GRADUATES		
	Total	Men	Women	% W	Total	Women	% W
1968-69*	14,753	12,069	2,684	18.2	4,031	656	16.3
1969-70	15,292	12,104	3,188	20.8	4,366	792	18.1
1970-71*	15,326	11,956	3,370	22.0	4,356	876	20.1
1971-72	16,808	12,621	4,187	24.9	4,416	997	22.6
1972-73	18,956	13,936	5,020	26.5	4,745	1,150	24.2
1973-74	21,287	15,258	6,029	28.3	5,414	1,415	26.1
1974-75	23,235	16,168	7,067	30.4	6,246	1,685	27.0
1975-76	24,416	16,303	8,113	33.2	6,994	2,057	29.4
1976-77	24,082	15,226	8,856	36.8	7,649	2,541	33.2
1977-78	23,884	14,538	9,346	39.1	7,450	2,715	36.5
1978-79	23,649	13,636	9,442	39.9	7,095	2,835	40.0
1979-80	23,074	13,028	10,046	43.5	8,104	3,185	39.3
1980-81	22,093	11,839	10,254	46.4	6,908	3,144	45.5
1981-82	20,468	10,527	9,941	48.6	6,448	3,031	47.0
1982-83	19,350	9,556	9,794	50.6			

TABLE 8-50

THIRD FROM LAST YEAR ENROLLMENTS IN U.S. SCHOOLS OF PHARMACY BY SEX, 1968-69 THRU 1982-83

Academic Year	Total	Men	Women	% W
1968-69*	5,406	4,322	1,084	20.1
1969-70	5,521	4,265	1,256	22.7
1970-71*	5,694	4,345	1,349	23.7
1971-72	6,532	4,849	1,683	25.8
1972-73	7,546	5,452	2,094	27.7
1973-74	8,143	5,785	2,358	29.0
1974-75	8,734	5,910	2,824	32.3
1975-76	8,710	5,601	3,109	35.7
1976-77	8,208	4,969	3,239	39.5
1977-78	8,461	5,035	3,426	40.5
1978-79	8,321	4,694	3,627	43.6
1979-80	8,035	4,398	3,637	45.3
1980-81	7,551	3,896	3,655	48.4
1981-82	6,899	3,441	3,458	50.1
1982-83	6,574	3,078	3,496	53.2

* Excludes University of Puerto Rico

TABLE 8-51

TOTAL FULL-TIME ENROLLMENT IN THE LAST THREE YEARS IN PHARMACY SCHOOLS BY SEX AND MINORITY GROUP, FALL 1974-FALL 1982

	Black		Hispanic American**		Native American		Asian American		Other American Minority		Non-American Minority		Total Minority		
FALL	M	F	M	F	M	F	M	F	M	F	M	F	M	F	Total
1974	433	294	357	454	26	6	398	249	35	8	735	341	1,984	1,352	3,336
1975	488	427	418	510	26	10	427	278	60	35	728	289	2,127	1,549	3,676
1976	447	491	380	582	26	11	422	303	20	16	565	267	1,860	1,670	3,530
1977	453	531	344	627	32	7	420	341	28	20	522	288	1,799	1,814	3,613
1978	338	554	338	609	21	13	488	392	36	35	459	248	1,690	1,851	3,541
1979	410	548	339	585	23	13	510	461	35	30	476	238	1,793	1,875	3,668
1980	381	564	360	574	21	15	497	538	23	18	520	320	1,802	2,029	3,831
1981	378	554	303	484	25	13	464	576	33	33	518	541	1,721	2,001	3,722
1982	389	546	315	469	21	15	425	647	42	44	628	402	1,820	2,123	3,943

**Includes University of Puerto Rico.

FIELD: Pharmaceutical Sciences

SOURCE: Graduate Enrollment Report, Fall 1974 thru Fall 1981, American Association of Colleges of Pharmacy

TABLE 8-52

NUMBER AND PERCENT OF FULL-TIME GRADUATE ENROLLMENTS AND MINORITY ENROLLMENTS IN MASTER'S AND PH.D. PROGRAMS BY FIELD AND SEX, FALL 1974 - FALL 1981

FIELD	TOTAL						MINORITY					
	Master's			Doctorate			Master's			Doctorate		
	Men	Women	% Women	Men	Women	% Women	Men	Women	% Minority	Men	Women	% Minority
PHARMACY												
Fall 1974	75	19	20.2	109	16	12.8	5	0	5.3	7	1	6.4
Fall 1975	86	27	23.9	143	28	16.4	5	1	5.3	16	7	13.5
Fall 1976	78	24	23.5	163	23	12.4	7	4	10.8	19	4	12.4
Fall 1977	90	20	18.2	165	28	14.5	11	4	13.6	10	3	6.7
Fall 1978	114	84	42.4	264	78	22.8	12	3	7.6	13	4	5.0
Fall 1980	124	88	41.5	305	105	25.6	10	2	5.7	28	8	8.8
Fall 1981	124	72	36.7	303	132	30.3	4	4	4.1	21	9	6.9
PHARM. CHEMISTRY												
Fall 1974	77	18	18.9	217	30	12.1	2	0	2.1	17	2	7.7
Fall 1975	98	26	21.0	212	30	12.4	4	0	3.2	17	3	8.3
Fall 1976	92	36	28.1	209	47	18.4	1	3	3.1	13	4	6.6
Fall 1977	89	24	21.2	217	51	19.0	9	4	11.5	15	6	7.8
Fall 1978	146	50	25.5	305	95	23.8	14	6	10.2	22	3	6.3
Fall 1980	119	63	34.6	310	107	25.7	6	9	8.2	15	9	5.8
Fall 1981	91	67	42.4	334	111	24.9	1	4	3.2	16	10	5.8
PHARMACOGNOSY												
Fall 1974	25	7	21.9	24	5	17.2	0	0	0.0	0	0	0.0
Fall 1975	12	11	47.8	31	7	18.4	0	0	0.0	2	0	5.3
Fall 1976	17	15	46.9	32	12	27.3	0	0	0.0	2	1	6.8
Fall 1977	21	15	41.7	28	9	24.3	0	2	5.6	2	1	8.1
Fall 1978	20	14	41.2	49	22	31.0	0	0	0.0	3	0	4.2
Fall 1980	15	10	40.0	54	16	22.9	0	1	4.0	4	0	5.7
Fall 1981	16	12	42.9	51	16	23.9	0	2	7.1	3	0	4.5
PHARMACOLOGY												
Fall 1974	67	23	25.6	135	27	16.7	4	1	5.6	6	4	6.2
Fall 1975	82	26	24.1	156	28	15.2	2	0	1.9	8	2	5.4
Fall 1976	81	30	27.0	145	32	18.1	3	1	3.6	6	1	4.0
Fall 1977	99	30	23.3	151	35	18.8	7	5	9.3	3	0	1.6
Fall 1978	103	47	31.3	163	44	21.3	8	5	8.7	5	2	3.4
Fall 1980	113	71	38.6	183	62	25.3	7	8	8.2	6	4	4.1
Fall 1981	98	70	41.7	180	80	30.8	9	8	10.1	4	5	3.5
PHARM. ADMIN.												
Fall 1974	25	5	16.7	30	3	9.1	3	1	13.3	0	0	0.0
Fall 1975	21	3	12.5	29	3	9.4	4	0	16.7	0	0	0.0
Fall 1976	37	11	22.9	38	6	13.6	8	2	20.8	0	0	0.0
Fall 1977	47	11	19.0	32	4	11.1	4	0	6.9	0	0	0.0
Fall 1978	46	15	24.6	37	8	17.8	3	0	4.9	1	0	2.2
Fall 1980	50	27	35.1	35	14	28.6	1	0	1.3	1	2	6.1
Fall 1981	48	25	34.2	35	12	25.5	3	1	5.5	0	1	2.1
HOSPITAL PHARM.												
Fall 1974	99	21	17.5	0	0	0.0	3	0	2.5	0	0	0.0
Fall 1975	126	33	20.8	0	0	0.0	1	3	2.5	0	0	0.0
Fall 1976	111	32	22.4	0	0	0.0	1	1	1.4	0	0	0.0
Fall 1977	110	38	25.7	0	0	0.0	1	2	2.0	0	0	0.0
Fall 1978	108	37	25.5	1	0	0.0	3	0	2.1	0	0	0.0
Fall 1980	101	54	34.8	1	1	50.0	1	6	4.5	0	0	0.0
Fall 1981	97	56	36.6	2	1	33.3	2	5	4.6	0	1	33.3
TOTAL												
Fall 1974	368	93	20.2	515	81	13.6	17	2	4.1	30	7	6.2
Fall 1975	425	126	22.9	571	96	14.4	16	4	3.6	43	12	8.2
Fall 1976	416	148	26.2	587	120	17.0	20	11	5.5	40	10	7.1
Fall 1977	456	138	23.2	593	127	17.6	32	17	3.2	30	10	5.6
Fall 1978	537	247	31.5	819	247	23.2	36	19	7.0	44	9	5.0
Fall 1980	522	313	37.5	888	305	25.6	25	26	6.1	54	23	6.5
Fall 1981	474	304	39.1	905	352	28.0	19	24	5.5	44	26	5.6

FIELD: Podiatry

SOURCE: Minorities and Women in the Health Fields, Health Resources Administration, U.S. Dept. of HEW, May 1974; Women in Health Careers, U.S. Dept. of HEW; and data from American Association of Colleges of Podiatric Medicine

TABLE 8-53

TOTAL ENROLLMENTS IN SCHOOLS OF PODIATRY IN THE UNITED STATES BY SEX, 1969-70 THROUGH 1981-82

ACADEMIC YEAR	NUMBER OF STUDENTS				
	Total	Men	% Men	Women	% Women
1969-70	1,095	1,085	99.1	10	0.9
1970-71	1,148	1,132	98.6	16	1.4
1971-72	1,268	1,252	98.7	16	1.3
1972-73	1,401	1,380	98.5	21	1.5
1973-74	1,623	1,583	97.6	40	2.4
1974-75	1,836	1,777	96.8	59	3.2
1975-76	2,081	1,981	95.2	100	4.8
1976-77	2,204	2,047	92.9	157	7.1
1977-78	2,388	2,129	89.2	259	10.8
1978-79	2,498	2,230	89.3	268	10.7
1979-80	2,531	2,226	87.9	305	12.1
1980-81	2,577	2,271	88.1	306	11.9
1981-82	2,584	2,223	86.0	361	14.0
1982-83	2,608	2,180	83.6	428	16.4

SOURCE: Journal of Podiatric Medical Education, Vol. 12, No. 1, Winter 1981, and personal communication, American Association of Colleges of Podiatric Medicine

TABLE 8-54

MINORITY ENROLLMENT IN COLLEGES OF PODIATRIC MEDICINE, 1978-1982

MINORITY GROUP	1978		1979		1980		1981		1982	
	Number	%	Number	%	Number	%	Number	%	Number	%
Black	77	3.1	93	3.7	110	4.3	125	4.8	154	5.9
Spanish Surname	27	1.1	28	1.1	32	1.2	40	1.5	33	1.3
American Indian	8	0.3	5	0.2	6	0.2	5	0.2	5	0.2
Oriental	51	2.0	63	2.5	68	2.6	68	2.6	75	2.9
Total Minority	163	6.5	189	7.5	216	8.4	238	9.2	267	10.2
Total Students	2,498	100.0	2,531	100.0	2,577	100.0	2,584	100.0	2,608	100.0

FIELD: Nursing

SOURCE: Earned Degrees Conferred Series 1969-70 through 1980-81, U. S. Office of Education (NCES)

TABLE 8-55

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1969-70 - 1980-81

YEAR	BACHELOR'S			MASTER'S			DOCTORATE		
	Total	Women	% Women	Total	Women	% Women	Total	Women	% Women
1969-70	11,280	11,120	98.6	1,549	1,531	98.8	11	10	90.9
1970-71	12,283	12,029	97.9	1,542	1,511	98.0	7	6	85.7
1971-72	13,245	12,902	97.4	1,846	1,815	98.3	10	10	100.0
1972-73	15,526	15,063	97.0	2,093	1,983	94.7	17	13	76.5
1973-74	19,409	18,653	96.1	2,293	2,229	97.2	14	14	100.0
1974-75	23,813	22,709	95.4	2,220	2,154	97.0	16	16	100.0
1975-76	26,846	25,484	94.9	3,058	2,968	97.1	16	16	100.0
1976-77	28,402	26,870	94.6	3,257	3,155	96.9	24	22	91.6
1977-78	30,307	28,661	94.6	3,812	3,671	96.3	56	53	94.6
1978-79	31,808	30,002	94.3	4,256	4,088	96.1	68	65	95.6
1979-80	32,852	31,054	94.5	4,637	4,464	96.3	118	116	98.3
1980-81	32,794	31,140	95.0	5,096	4,899	96.1	113	109	96.5
TOTAL	278,565	265,687	95.4	35,659	34,468	96.7	470	450	95.7

SOURCE: A Statistical Profile of Registered Nurses in the United States 1977-1980, by Eugene Levine and Evelyn B. Moses, DHPA Report 82-3, Division of Health Professions Analysis, Bureau of Health Professions, U.S. Department of Health and Human Services

TABLE 8-56

STATISTICAL PROFILE OF REGISTERED NURSES, SEPTEMBER 1977 AND NOVEMBER 1980*

Characteristic	Total registered nurses		Total employed in nursing		Total not employed in nursing	
	1977	1980	1977	1980	1977	1980
Total number.....	1,401,633	1,615,846	978,234	1,235,152	423,400	379,712
Median age.....	39.8	38.4	37.7	36.3	46.1	47.1
Percent male.....	1.9	2.7	2.1	3.0	1.4	1.6
Percent minority.....	6.2	7.0	7.5	8.2	3.5	3.4
Percent married.....	72.4	70.8	68.9	68.1	80.5	79.8
Percent married with children at home....	45.7	47.5	43.8	46.3	50.1	51.6
Percent whose basic nursing education was:						
Diploma.....	74.8	63.4	71.4	59.6	82.6	75.7
Associate degree.....	11.3	18.5	13.7	21.2	5.8	9.7
Baccalaureate or higher degree.....	13.7	17.3	14.6	18.5	11.4	13.6
Percent whose highest nursing related education was:						
Diploma.....	67.0	54.6	63.4	50.9	75.1	66.4
Associate degree.....	11.3	17.7	13.5	20.0	6.0	10.1
Baccalaureate.....	17.5	22.1	18.5	23.2	15.4	18.4
Masters or doctorate..	4.1	5.1	4.4	5.3	3.3	4.4

* Percentages included on this table are derived from the segment of the total population indicating the particular characteristic being studied.

FIELD: Nursing

SOURCE: The Registered Nurse Population, November, 1980 Health Resources and Services Administration, 1983

TABLE 8-57

REGISTERED NURSE POPULATION, BY SEX, RACIAL/ETHNIC BACKGROUND, AGE GROUP AND EMPLOYMENT STATUS, 1980

Sex, Racial/Ethnic and Age group	Totals 1/			Employed in nursing			Not employed in nursing		
	Number in Sample	Estimated Number	Estimated Percent	Number in Sample	Estimated Number	Estimated Percent	Number in Sample	Estimated Number	Estimated Percent
Total	30,375	1,662,382	100.0	23,563	1,272,851	100.0	6,791	388,537	100.0
Sex									
Male	824	45,060	2.7	716	38,842	3.0	108	6,218	1.6
Female	29,275	1,603,069	96.4	22,643	1,223,301	96.1	6,624	379,432	97.7
Not known	276	14,254	.9	204	10,709	.8	59	2,887	.7
Racial/Ethnic Backgrounds									
White (non-hispanic)	28,018	1,521,752	91.5	21,567	1,151,221	90.4	6,444	370,263	95.3
Black (non-hispanic)	905	60,845	3.7	812	54,585	4.3	92	6,222	1.6
Asian/Pacific Islander	575	33,600	2.0	495	30,470	2.4	80	3,130	.8
American Indian/Alaskan Native	87	4,249	.3	64	3,045	.2	23	1,204	.3
Hispanic	383	20,816	1.2	325	17,938	1.4	58	2,878	.7
Not known	407	21,118	1.3	300	15,592	1.2	94	4,839	1.2
Age Group									
Less than 25	2,393	128,554	7.7	2,275	122,354	9.6	118	6,200	1.6
25-29	5,573	289,777	17.4	4,848	254,138	20.0	723	35,599	9.2
30-34	4,707	255,400	15.4	3,815	206,097	16.2	892	49,303	12.7
35-39	3,774	205,978	12.4	2,958	159,025	12.5	815	46,908	12.1
40-44	3,221	180,326	10.8	2,534	141,459	11.1	687	38,867	10.0
45-49	2,751	150,087	9.0	2,152	117,467	9.2	599	32,620	8.4
50-54	2,472	137,154	8.2	1,877	102,987	8.1	595	34,167	8.8
55-59	2,248	124,613	7.5	1,546	83,003	6.5	701	41,561	10.7
60-64	1,424	81,485	4.9	757	41,791	3.3	665	39,607	10.2
65 and over	1,199	74,270	4.5	334	18,657	1.5	883	55,527	14.3
Not known	613	34,737	2.1	467	25,874	2.0	133	8,176	2.1

1/ Includes an estimated 994 registered nurses for whom it was not known whether or not they were employed in nursing.

NOTE: Estimated number and percent may not add to total due to rounding..

FIELD: Hospital Administration

SOURCE: Earned Degrees Conferred Series 1968-69 through 1980-81, U. S. Office of Education (NCES)

TABLE 8-58

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1968-69 - 1980-81

YEAR	BACHELOR'S			MASTER'S			DOCTORATE		
	Total	Women	% Women	Total	Women	% Women	Total	Women	% Women
1968-69	37	3	8.1	403	59	14.6	2	1	50.0
1969-70	32	6	18.8	479	64	13.4	7	0	-
1970-71	60	4	6.7	518	64	12.4	14	0	-
1971-72	126	55	43.6	677	102	15.1	12	0	-
1972-73	121	16	13.2	743	82	11.0	12	2	16.7
1973-74	185	32	17.3	990	206	20.8	21	4	19.0
1974-75	306	99	32.4	997	196	19.6	13	0	-
1975-76	421	150	35.6	1,139	278	24.4	11	0	-
1976-77	668	320	47.9	1,354	355	26.2	18	3	16.7
1977-78	1,158	716	61.8	1,565	567	36.2	12	2	16.7
1978-79	1,338	864	64.6	1,748	671	38.4	16	4	25.0
1979-80	1,692	1,154	68.2	1,698	718	42.3	13	4	30.8
1980-81	1,581	1,043	66.0	1,996	933	46.7	12	2	16.7
TOTAL	8,725	4,462	51.1	14,307	4,295	30.0	163	22	13.5

FIELD: Medical Technology

TABLE 8-59

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1968-69 - 1980-81

YEAR	BACHELOR'S			MASTER'S			DOCTORATE		
	Total	Women	% Women	Total	Women	% Women	Total	Women	% Women
1968-69	2,846	2,551	89.6	28	23	82.1	0	0	-
1969-70	3,228	2,823	87.5	71	57	80.3	0	0	-
1970-71	3,145	2,755	87.6	72	55	76.4	4	1	25.0
1971-72	3,407	2,880	84.5	97	62	63.9	0	0	-
1972-73	3,806	3,102	81.5	95	77	81.1	0	0	-
1973-74	4,840	3,864	79.8	164	95	57.9	0	0	-
1974-75	5,087	4,005	78.7	174	91	52.3	0	0	-
1975-76	5,445	4,356	80.0	266	137	51.5	0	0	-
1976-77	5,286	4,242	80.2	333	184	55.3	3	2	66.7
1977-78	5,288	4,221	79.8	292	175	59.9	4	1	25.0
1978-79	5,235	4,143	79.1	303	179	59.1	1	0	-
1979-80	5,130	4,128	80.5	231	154	66.7	1	1	100.0
1980-81	4,896	4,012	81.9	233	150	64.4	1	1	100.0
TOTAL	57,639	47,082	81.7	2,359	1,439	61.0	14	6	42.9

FIELD: Physical Therapy

SOURCE: Earned Degrees Conferred Series, 1968-69 - 1980-81, U.S. Office of Education (NCES)

TABLE 8-60

DEGREES CONFERRED IN PHYSICAL THERAPY BY INSTITUTIONS OF HIGHER EDUCATION IN THE UNITED STATES, BY LEVEL OF DEGREE AND SEX: ACADEMIC YEARS 1968-69 THROUGH 1980-81

ACADEMIC YEAR	BACHELOR'S			MASTER'S		
	Total	Women	% Women	Total	Women	% Women
1968-69	1,071	922	86.1	41	30	73.2
1969-70	1,091	922	84.5	49	32	65.3
1970-71	1,306	1,045	80.0	75	56	74.7
1971-72	1,483	1,182	79.7	55	30	54.5
1972-73	1,756	1,381	78.6	78	51	65.4
1973-74	1,900	1,497	78.8	111	77	69.4
1974-75	2,121	1,615	76.1	133	85	63.9
1975-76	2,091	1,620	77.5	167	113	67.7
1976-77	2,333	1,790	96.7	162	101	62.3
1977-78	2,418	1,903	78.7	258	184	71.3
1978-79	2,651	2,079	78.4	242	154	63.6
1979-80	2,372	1,845	77.8	282	203	72.0
1980-81	2,745	2,213	80.6	250	186	74.4
TOTAL	25,338	20,014	79.0	1,903	302	15.9

FIELD: Public Health

TABLE 8-61

DEGREES CONFERRED IN PUBLIC HEALTH BY INSTITUTIONS OF HIGHER EDUCATION IN THE UNITED STATES, BY LEVEL OF DEGREE AND SEX: ACADEMIC YEARS 1968-69 THROUGH 1980-81

ACADEMIC YEAR	BACHELOR'S			MASTER'S			DOCTORATE		
	Total	Women	% Women	Total	Women	% Women	Total	Women	% Women
1968-69	83	45	54.2	1,160	405	34.9	78	13	16.7
1969-70	58	30	51.7	1,210	439	36.3	90	20	22.2
1970-71	127	36	28.3	1,257	473	37.6	85	19	22.4
1971-72	121	32	26.4	1,575	631	40.1	81	25	30.9
1972-73	184	66	35.9	1,591	713	44.8	84	24	28.6
1973-74	273	89	32.6	1,781	828	46.5	113	32	28.3
1974-75	370	165	44.6	1,981	943	47.6	127	43	33.9
1975-76	585	285	48.7	2,165	1,047	48.4	165	59	35.7
1976-77	519	257	49.5	2,176	1,102	50.6	141	47	33.3
1977-78	552	291	52.7	2,288	1,210	52.9	148	59	39.9
1978-79	506	267	52.8	2,479	1,391	56.1	169	65	38.5
1979-80	586	347	59.2	2,596	1,389	53.5	182	78	42.9
1980-81	694	456	65.7	2,731	1,557	57.0	194	83	42.8
TOTAL	4,658	2,366	50.8	24,990	12,128	48.5	1,657	567	34.2

FIELD: Speech Pathology

SOURCE: Earned Degrees Conferred Series, 1970-71 through 1980-81, U.S. Office of Education (NCES)

TABLE 8-62

DEGREES CONFERRED IN SPEECH PATHOLOGY AND AUDIOLOGY, BY DEGREE LEVEL AND SEX, 1970-71 - 1980-81

YEAR	BACHELOR'S			MASTER'S			DOCTORATE		
	Total	Women	% Women	Total	Women	% Women	Total	Women	% Women
1970-71	1,427	1,251	87.7	845	690	81.7	70	22	31.4
1971-72	1,863	1,609	86.4	1,047	894	85.4	58	19	32.8
1972-73	2,574	2,259	87.8	1,417	1,175	82.9	69	23	33.3
1973-74	3,278	2,934	89.5	1,964	1,671	85.1	78	28	35.9
1974-75	3,732	3,345	89.6	2,377	2,011	84.6	71	30	42.3
1975-76	3,925	3,582	91.3	3,132	2,735	87.3	109	46	42.2
1976-77	3,864	3,555	92.0	3,027	2,711	89.6	96	49	51.0
1977-78	3,551	3,247	91.4	3,190	2,921	91.6	121	58	47.9
1978-79	3,554	3,297	92.8	3,496	3,180	91.0	113	60	53.1
1979-80	3,576	3,319	92.8	3,304	3,056	92.5	110	56	50.9
1980-81	3,445	3,225	93.6	3,226	2,982	92.4	112	59	52.7
1981-82									
Total	34,789	31,623	90.9	26,725	24,026	89.9	1,007	450	44.7

FIELD: Public Health

SOURCE: Data compiled by Health Resources Administration, Bureau of Health Professions, Division of Health Professions Analysis, based on data from the Association of Schools of Public Health

TABLE 8-63

STUDENTS IN SCHOOLS OF PUBLIC HEALTH, BY SEX AND MINORITY, ACADEMIC YEARS 1975-76 THROUGH 1979-80

Academic Year	Total Students Identified by Sex [1]	Female Students	Percent Female of Total Students Identified by Sex	Total Students Identified by Race [2]	Racial/Ethnic Category					Percent Minority of Total Students Identified by Race
					Black	Hispanic	Oriental	American Indian	Total Minority	
1975-76	6,020	2,857	47.5	5,806	434	372	414	62	1,282	22.1
1976-77	6,182	3,001	48.5	6,033	476	260	520	70	1,326	22.0
1977-78	6,426	3,193	49.7	6,301	423	311	490	74	1,298	20.6
1978-79	7,071	3,704	52.4	6,897	535	220	593	75	1,423	20.6
1979-80	7,346	3,949	53.8	7,276	562	245	732	68	1,607	22.1

[1] Counts of students not identified by sex in the listed years are: 1975-76, 441 students; 1976-77, 433; 1977-78, 415; 1978-79, 651; and 1979-80, 869.

[2] Counts of students not identified by race in the listed years are: 1975-76, 655 students; 1976-77, 582; 1977-78, 540; 1978-79, 825; and 1979-80, 939.

FIELD: Medical, Hospital Administration, Dentistry, Public Health, Veterinary, Medical Science

SOURCE: Federal Civilian Workforce Statistics, Equal Employment Opportunity Statistics, U.S. Office of Personnel Management, AR-80-71, Nov. 1980

TABLE 8-64

NUMBER AND PERCENT OF FEDERAL WORKERS EMPLOYED IN THE MEDICAL, HEALTH AND VETERINARY MEDICAL SCIENCES BY OCCUPATIONAL TITLE, SEX AND MINORITY STATUS, NOVEMBER 1980

OCCUPATIONAL TITLE	ALL EMPLOYEES			TOTAL MINORITY				BLACK		HISPANIC		AM. INDIAN		ASIAN		ALL OTHERS	
	Total	Women	% W	Total	%	Women	% W	No.	% B	No.	% H	No.	% I	No.	% A	No.	% O
Medical Officer	8,434	1,199	14.2	1,403	16.6	318	3.8	293	3.5	483	5.7	8	0.1	619	7.3	7,031	83.4
Physician's Assistant	954	288	30.2	200	21.0	78	8.2	87	9.1	29	3.0	81	8.5	3	0.3	754	79.0
Nurse	35,733	33,185	92.9	7,395	20.7	7,040	19.7	4,608	12.9	1,058	3.0	429	1.2	1,300	3.6	28,338	79.3
Dietitian	1,179	1,145	97.1	261	22.1	252	21.4	167	14.2	40	3.4	6	0.5	48	4.1	918	77.9
Occupational Therapist	670	586	87.5	89	13.3	82	12.2	48	7.2	24	3.6	0	0.0	17	2.5	581	86.7
Physical Therapist	711	451	63.4	94	13.2	58	8.2	44	6.2	36	5.1	0	0.0	14	2.0	617	86.8
Medical Technologist	4,465	3,014	67.5	880	19.7	538	12.0	492	11.0	185	4.1	23	0.5	180	4.0	3,585	80.3
Medical Technician	2,683	1,506	56.1	862	32.1	479	17.9	602	22.4	142	5.3	71	2.6	47	1.8	1,821	67.9
Pharmacist	2,417	441	18.2	350	14.5	117	4.8	166	6.9	86	3.6	11	0.5	87	3.6	2,067	85.5
Optometrist	71	1	1.4	5	7.0	0	0.0	2	2.8	0	0.0	0	0.0	3	4.2	66	93.0
Podiatrist	45	2	4.4	5	11.1	2	4.4	5	11.1	0	0.0	0	0.0	0	0.0	40	88.9
Diagnos./Radiol. Technologist	2,261	1,097	41.2	743	27.9	278	10.4	502	18.9	140	5.3	73	2.7	28	1.1	1,918	72.1
Dental Officer	978	34	3.5	67	6.9	11	1.1	32	3.3	23	2.4	2	0.2	10	1.0	911	93.1
Dental Assistant	2,944	2,729	92.7	929	31.6	849	28.8	432	14.7	118	4.0	345	11.7	34	1.2	2,015	68.4
Dental Hygienist	363	355	97.8	46	12.7	46	12.7	27	7.4	14	3.9	1	0.3	4	1.1	317	87.3
Industrial Hygienist	885	157	17.7	110	12.4	29	3.3	66	7.5	24	2.7	3	0.3	17	1.9	775	87.6
Veterinary Med. Scientist	2,142	86	4.0	265	12.4	20	0.9	96	4.5	60	2.8	9	0.4	100	4.7	1,877	87.6

CHAPTER 9
SOCIAL AND BEHAVIORAL SCIENCES

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FIELD: Social Sciences

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade, National Research Council, March 1973.
Doctorate Recipients from United States Universities Summary Reports 1972 - 1981, National Research Council

TABLE 9-1

DOCTORATES AWARDED FROM 1920 TO 1981 BY SUBFIELD OF DOCTORATE AND SEX

	CY1920-FY1972			FY1973-1977			FY1978			FY1979-1980			FY1981		
	Total	Women	% Women	Total	Women	% Women	Total	Women	% Women	Total	Women	% Women	Total	Women	% Women
Social Sciences Subtotal	37,197	3,754	10.1	20,186	4,143	20.5	3,404	828	24.3	6,453	1,703	26.4	6,505	2,315	35.6
Communications [1]	140	27	19.3	1,134	288	25.4	270	72	26.7	519	182	35.1	221	92	41.6
Anthropology	2,503	563	22.5	1,904	651	34.2	399	163	40.9	752	342	45.5	369	152	41.2
Sociology	7,045	1,227	17.4	3,383	1,008	29.8	610	224	36.7	1,234	463	37.5	603	242	40.1
Economics	13,638	738	5.4	4,270	377	8.8	778	91	11.7	1,525	205	13.4	807	100	12.4
Econometrics [2]	381	17	4.5	137	6	4.4	23	2	8.7	44	3	6.8	17	1	5.9
Statistics	475	26	5.5	212	24	11.3	46	14	30.4	56	13	23.2	39	7	17.9
Political Science, Public Administration [3]	8,147	683	8.4	2,344	337	14.4				1,335	256	19.2	592	123	20.8
Political Science [3]				1,241	208	16.8	603	118	19.6	1,027	197	19.2	445	96	21.6
Public Administration [3]				267	40	15.0	156	22	14.1	308	59	19.2	147	27	18.4
International Relations	1,506	146	9.7	589	77	13.1	92	10	10.9	160	28	17.5	87	12	13.8
Geography	1,973	143	7.2	910	84	9.2	158	31	19.6	259	40	15.4	109	20	18.3
Area Studies	349	47	13.5	147	30	20.4	26	10	38.5	43	13	30.2	20	5	25.0
Urban & Regional Planning [4]	85	0	-	371	48	12.9	76	23	30.3	170	33	19.4	94	17	18.1
Social Sciences, General [5]	191	28	14.7	170	44	25.9	33	10	30.3	66	30	45.5	22	5	22.7
Social Sciences, Other	904	129	14.3	804	181	22.5	134	38	28.4	260	89	34.2	133	58	43.6

[1] Added in 1972.
[2] Originally shown as "Statistics, including Econometrics." In 1966, it was broken out into "econometrics" and "Statistics."
[3] "Political Science" and "Public Administration" were divided into two subfields in 1976. Because a number of doctorate recipients reported on old forms in 1976 both the old and new fields were included that year.
[4] Added in 1970.
[5] Subfields were specified until FY 1958. Except for a few cases in earlier years, all doctorates were included in the "general" classification of their respective fields.

FIELD: Social Sciences

SOURCE: Foreign Participation in U.S. Science and Engineering Education and Labor Markets, Special Report, NSF 81-316, National Science Foundation, September 1981 and 1980 and 1981 Summary Reports, Doctorate Recipients from United States Universities, National Research Council

TABLE 9-2

NUMBER OF PH.D. RECIPIENTS IN THE SOCIAL SCIENCES BY TYPE OF CITIZENSHIP, 1960 - 1981

YEAR	Total	U.S.	Foreign			Citizenship not known
			Total	Immigrants	Non-Immigrants	
1960	1,710	1,488	204	51	153	18
1961	1,810	1,574	204	38	166	32
1962	1,925	1,647	240	30	210	38
1963	2,035	1,759	230	59	171	46
1964	2,299	1,951	283	70	213	65
1965	2,379	2,028	315	75	240	36
1966	2,697	2,266	361	80	281	70
1967	3,160	2,666	414	126	288	80
1968	3,534	3,029	433	122	311	72
1969	4,036	3,452	505	152	353	79
1970	4,616	3,926	634	204	430	56
1971	5,285	4,503	718	242	476	64
1972	5,621	4,738	771	265	506	112
1973	5,945	4,986	846	258	588	113
1974	6,017	4,919	815	226	589	283
1975	6,209	5,253	839	228	611	117
1976	6,373	5,434	834	195	639	105
1977	6,365	5,340	805	203	602	220
1978	6,057	5,033	735	202	533	289
1979	5,943	4,957	736	179	557	250
1980	6,253	5,296	726	200	526	231
1981	6,505	5,463	772	200	572	270

FIELD: Social Work and Helping Services

SOURCE: Earned Degrees Conferred Series, 1970-71 - 1979-81, U.S. Office of Education (NCES)

TABLE 9-3

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1970-71 to 1980-81

YEAR	BACHELOR'S			MASTER'S			DOCTORATE		
	Total	Women	% Women	Total	Women	% Women	Total	Women	% Women
1970-71	4,690	3,538	75.4	6,148	3,710	60.3	126	39	36.9
1971-72	6,223	4,661	74.8	6,656	4,049	60.8	99	31	31.3
1972-73	8,182	6,035	73.7	6,896	4,353	63.1	111	29	26.1
1973-74	9,960	7,115	71.4	7,974	4,965	62.3	109	33	30.3
1974-75	10,784	8,049	74.6	8,852	5,527	62.4	135	48	35.5
1975-76	11,032	8,350	75.7	9,002	6,012	66.8	163	73	44.8
1976-77	11,673	9,035	77.4	9,596	6,549	68.3	131	55	42.0
1977-78	12,672	9,947	78.5	9,986	6,998	70.1	138	66	47.8
1978-79	13,180	10,608	80.5	9,893	7,025	71.0	136	61	44.9
1979-80	12,870	10,503	81.6	10,158	7,326	72.1	162	81	50.0
1980-81	12,410	10,303	83.0	10,240	7,626	74.5	193	104	53.9
TOTAL	113,676	88,144	77.5	95,401	64,140	67.2	1,503	620	41.3

FIELD: Social and Behavioral Sciences

SOURCE: 1980 Census of Occupations, Special EEO File, Bureau of the Census

TABLE 9-4

SOCIAL AND BEHAVIORAL SCIENTISTS AND SOCIAL WORKERS BY BROAD FIELD, SEX AND RACE/ETHNICITY, 1980

	Psychologists		Economists		Sociologists		Other Social Scientists		Social Workers	
	No.	%	No.	%	No.	%	No.	%	No.	%
TOTAL	92,929	100.00	95,565	100.00	2,550	100.00	13,477	100.00	459,984	100.00
MALES	49,102	52.84	67,218	70.34	1,489	58.39	8,177	60.67	161,258	35.06
White*	44,635	48.03	61,773	64.64	1,294	50.75	7,483	55.52	118,446	25.75
Black*	2,362	2.54	2,096	2.19	111	4.35	214	1.59	26,559	5.77
Indian/Alaskan Native*	143	0.15	169	0.18	0	0.00	38	0.28	1,623	0.35
Asian/Pacific Isl.*	515	0.55	1,599	1.67	44	1.73	172	1.28	1,601	0.57
Other Race*	68	0.07	98	0.10	0	0.00	19	0.14	271	0.06
Hispanic	1,379	1.48	1,483	1.55	40	1.57	251	1.86	11,758	2.56
FEMALES	43,827	47.16	28,347	29.66	1,061	41.66	5,300	39.33	298,726	64.94
White*	37,766	40.64	25,241	26.41	927	36.35	4,739	35.16	215,573	46.87
Black*	4,100	4.41	1,828	1.91	42	1.65	242	1.80	60,946	13.25
Indian/Alaskan Native*	193	0.21	68	0.07	12	0.47	30	0.22	2,565	0.56
Asian/Pacific Isl.*	546	0.59	565	0.59	48	1.88	95	0.70	3,765	0.82
Other Race*	94	0.10	37	0.04	0	0.00	5	0.04	403	0.09
Hispanic	1,128	1.21	608	0.64	32	1.25	189	1.40	15,474	3.36

* Non-Hispanic

FIELD: Social Science, Psychology and Welfare

SOURCE: Federal Civilian Workforce Statistics, Equal Employment Opportunity Statistics, U.S. Office of Personnel Management, AR-80-71, Nov. 1980

TABLE 9-5

NUMBER AND PERCENT OF FEDERAL WORKERS EMPLOYED IN THE SOCIAL SCIENCES, PSYCHOLOGY AND WELFARE BY OCCUPATIONAL TITLE, SEX AND MINORITY STATUS, NOVEMBER 1980

OCCUPATIONAL TITLE	ALL EMPLOYEES			TOTAL MINORITY				BLACK		HISPANIC		AM. INDIAN		ASIAN		ALL OTHERS	
	Total	Women	% W	Total	%	Women	% W	No.	% B	No.	% H	No.	% I	No.	% A	No.	% O
Social Science	2,988	1,089	36.4	663	22.2	309	10.3	477	16.0	109	3.6	34	1.1	43	1.4	2,325	77.8
Economics	5,776	1,009	17.5	443	7.7	144	2.5	259	4.5	73	1.3	15	0.3	96	1.7	5,333	92.3
Foreign Affairs	2,114	336	15.9	147	7.0	54	2.6	104	4.9	26	1.2	2	0.1	15	0.7	1,967	93.0
International Relations	57	11	19.3	4	7.0	1	1.8	3	5.3	0	0.0	0	0.0	1	1.8	53	93.0
Manpower Research & Analysis	80	28	35.0	16	20.0	7	8.8	15	18.8	1	1.3	0	0.0	0	0.0	64	80.0
Geography	185	35	18.9	8	4.3	3	1.6	6	3.2	2	1.1	0	0.0	0	0.0	177	95.7
History	527	106	20.1	19	3.6	9	1.7	10	1.9	3	0.6	5	0.9	1	0.2	508	96.4
Psychology	3,332	574	17.2	171	5.1	63	1.9	104	3.1	31	0.9	10	0.3	26	0.8	3,161	94.9
Sociology	99	30	30.3	9	9.1	1	1.0	4	4.0	2	2.0	0	0.0	3	3.0	90	90.9
Social Work	3,553	1,552	43.7	782	22.0	418	11.8	526	14.8	125	3.5	101	2.8	32	0.9	2,771	78.0
General Anthropology	57	10	17.5	1	1.8	1	1.8	0	0.0	1	1.8	0	0.0	0	0.0	56	98.2
Archeology	407	111	27.3	11	2.7	0	0.0	0	0.0	6	1.5	3	0.7	2	0.5	396	97.3
TOTAL	19,075	4,891	25.6	2,274	11.9	1,010	5.3	1,508	7.9	379	2.0	170	0.9	219	1.1	16,901	88.6

FIELD: Anthropology

SOURCE: Earned Degrees Conferred Series, 1947-48 through 1980-81, U.S. Office of Education (NCES)

TABLE 9-6

DEGREES AWARDED, BY SEX AND LEVEL OF DEGREE, 1947-48 - 1980-81

	BACHELOR'S			MASTER'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1947-48 thru 1959-60	3,902	1,847	47.3	1,091	338	31.0
1960-61 thru 1969-70	16,264	8,729	53.7	3,093	1,142	36.9
1970-71	4,386	2,433	55.5	766	337	44.0
1971-72	5,147	2,802	54.4	818	363	44.4
1972-73	5,625	3,052	54.3	807	348	43.1
1973-74	6,002	3,329	55.5	885	388	43.8
1974-75	5,624	3,210	57.0	993	473	47.7
1975-76	5,188	2,980	57.4	937	454	48.4
1976-77	4,833	2,832	58.6	965	457	47.4
1977-78	4,300	2,589	60.2	856	427	49.9
1978-79	3,998	2,449	61.3	830	423	51.0
1979-80	3,606	2,258	62.6	832	453	54.4
1980-81	3,330	2,108	63.3	869	502	57.8
TOTAL	72,205	40,618	56.3	13,742	6,105	44.4

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade and Doctorate Recipients from United States Universities, Summary Reports 1971-1981, National Research Council

TABLE 9-7

DOCTORAL DEGREES BY SEX, 1920-1981

	Total Both Sexes	Women Only	% Women
CY 1920 thru FY 1959*	773	148	19.1
FY 1960 thru FY 1969	1,013	218	21.5
FY 1970-72	717	197	27.5
FY 1973	324	96	29.6
FY 1974	381	125	32.8
FY 1975	385	137	35.6
FY 1976	428	157	36.7
FY 1977	386	136	35.2
FY 1978	399	163	40.9
FY 1979	383	168	43.9
FY 1980	369	174	47.2
FY 1981	369	152	41.2
TOTAL	5,927	1,871	31.6

*Data are aggregated on a calendar year (CY) basis from 1920 to 1957 and on a fiscal year (FY) basis from 1958 (July 1, 1957 to June 30, 1958) to the present.

FIELD: Anthropology

SOURCE: Report of the 1981 Survey of Departments, American Anthropological Association, 1981

TABLE 9-8

ANTHROPOLOGY FACULTY* IN 223 DEPARTMENTS BY TENURE STATUS, RANK AND SEX, 1980-81

RANK	TENURED			TENURE TRACK			NON-TENURE TRACK			TOTAL		
	Total	Women	% W	Total	W	% W	Total	W	% W	Total	W	% W
Professor	709	99	14.0	3	1	33.3	12	2	16.7	724	102	14.1
Associate Professor	583	144	24.7	25	6	24.0	25	6	24.0	633	156	24.6
Assistant Professor	79	28	35.4	358	119	33.2	117	54	46.1	554	201	36.3
Instructor	10	2	20.0	20	5	25.0	125	60	48.0	155	67	43.2
TOTAL	1,381	273	19.8	406	131	32.3	279	122	43.7	2,066	526	25.5

* Includes 1,795 full-time and 271 part-time faculty. Women are 23.2% of full-time and 48.7% of part-time faculty.

TABLE 9-9

ANTHROPOLOGY FACULTY IN 223 DEPARTMENTS BY RANK AND MINORITY STATUS, 1980-81

RANK	Total	Indian	% I	Asian	% A	Black	% B	His-panic	% H	Min. Total	% M
Professor	724	3	0.4	13	1.8	9	1.2	7	1.0	32	4.4
Associate Professor	633	3	0.5	9	1.4	10	1.6	3	0.5	25	4.0
Assistant Professor	554			7	1.3	9	1.6	8	1.4	24	4.3
Instructor	155					1	0.7			1	0.7
TOTAL	2,066	6	0.3	29	1.4	29	1.4	18	0.9	82	4.0

FIELD: Anthropology

SOURCE: American Anthropological Association

TABLE 9-10

Percent Distribution of Anthropology PH. D.'s by Sex and Ethnicity, 1981-82

	Percent
Male	59.0
Female	41.0
White	92.0
Black	2.0
Hispanic	2.0
Asian/Pacific Islander	4.0
American Indian	0.0

TABLE 9-11

Current Employment Status of Anthropology, Ph. D.'s by Sex, 1976-77 and 1981-82

	1976-77		1981-82	
	% Male	% Female	% Male	% Female
Employed	96.0	82.0	87.0	68.0
Postdoctorate	2.0	0.0	7.0	23.0
Unemployed	3.0	19.0	8.0	14.0
Unemployed & Seeking	3.0	8.0	8.0	10.0
Enrolled in School	0.0	3.0	3.0	1.0

Note: Percentages may exceed 100% due to multiple response by individual respondents.

FIELD: Sociology

SOURCE: Earned Degrees Conferred Series, 1947-48 through 1980-81, U.S. Office of Education (NCES)

TABLE 9-12

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1947-48 - 1980-81

	BACHELOR'S			MASTER'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1947-48 thru 1959-60	85,039	48,441	57.0	6,115	1,871	30.6
1960-61 thru 1969-70	161,125	96,045	59.6	10,040	3,189	31.8
1970-71	33,662	19,959	59.3	1,809	677	37.4
1971-72	35,626	20,294	57.0	1,945	754	38.8
1972-73	35,994	20,249	56.3	1,923	777	40.4
1973-74	35,896	20,582	57.3	2,196	869	39.6
1974-75	31,817	18,487	58.1	2,112	808	38.3
1975-76	27,634	16,389	59.3	2,009	844	40.0
1976-77	24,713	15,034	60.8	1,830	812	44.4
1977-78	22,991	14,568	63.4	1,611	733	45.5
1978-79	20,545	13,390	65.2	1,415	670	47.4
1979-80	19,164	12,781	66.7	1,341	674	50.3
1980-81	17,272	12,025	69.6	1,240	650	52.4
TOTAL	551,814	328,446	59.5	35,587	13,328	37.5

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade and Doctorate Recipients from United States Universities, Summary Reports 1971-81, National Research Council

TABLE 9-13

DOCTORAL DEGREES BY SEX, 1920-1981

	Total Both Sexes	Women Only	% Women
CY 1920 thru FY 1959*	2,788	441	15.8
FY 1960 thru FY 1969	2,532	442	17.5
FY 1970-72	1,725	344	19.9
FY 1973	599	154	25.7
FY 1974	645	184	28.5
FY 1975	680	210	30.9
FY 1976	734	223	30.4
FY 1977	725	237	32.7
FY 1978	610	224	36.7
FY 1979	632	232	36.7
FY 1980	602	231	38.4
FY 1981	603	242	40.1
TOTAL	12,875	3,164	24.6

*Data are aggregated on a calendar year (CY) basis from 1920 to 1957 and on a fiscal year (FY) basis from 1958 (July 1, 1957 to June 30, 1958) to present.

FIELD: Anthropology and Sociology

SOURCE: Doctorate Recipients from United States Universities, Summary Reports 1975, 1977, 1978, and 1980, National Research Council

TABLE 9-14

PERCENT DISTRIBUTION OF DOCTORAL RECIPIENTS IN ANTHROPOLOGY AND SOCIOLOGY BY POSTDOCTORAL PRIMARY WORK ACTIVITY & SEX, FY 1975 - FY 1980

Postdoctoral Primary Work Activity	FY 1975		FY 1977		FY 1978		FY 1980	
	Men	Women	Men	Women	Men	Women	Men	Women
Research & Development	14.5	19.3	20.2	19.4	21.3	20.1	29.6	28.3
Teaching	75.5	72.6	66.2	69.6	62.8	67.0	56.5	55.7
Administration	2.0	1.9	3.3	3.2	4.1	3.6	6.5	5.7
Professional Services to Individuals	1.2	0.9	2.9	1.8	2.2	1.0	1.9	2.4
Other	0.4	1.4	0.9	0.9	1.1	1.5	1.9	1.9
Activity Unknown	6.5	3.8	6.6	5.1	8.5	6.7	3.7	6.1

SOURCE: ASA FOOTNOTES, American Sociological Association, December 1982

TABLE 9-15

FACULTY IN GRADUATE SOCIOLOGY DEPARTMENTS BY RANK, SEX AND MINORITY GROUP 1970-74, 1981

Rank	Year	% Women	% Black	% Indian American	% Hispanic	% Asian American	Total Faculty
Professor	1970	4	2	—	—	—	900
	1971	4	2	—	—	—	1079
	1972	5.4	1.9	0.2	0.2	1.1	1029
	1973	5.8	2.5	0.1	0.4	2.1	1029
	1974	5.6	2.6	0.0	0.5	0.3	1028
	1981	9.1	2.8	0.0	0.7	3.7	1062
Associate Professor	1970	10	3	—	—	—	672
	1971	11	3	—	—	—	744
	1972	11.4	2.8	0.5	0.5	1.4	647
	1973	12.0	3.0	0.0	1.0	3.3	735
	1974	13.5	4.1	0.0	1.5	2.3	748
	1981	15.5	3.1	0.0	1.1	2.4	942
Assistant Professor	1970	13	2	—	—	—	996
	1971	12	3	—	—	—	1163
	1972	17.0	2.9	0.5	1.0	2.1	1024
	1973	20.0	3.7	0.3	0.9	2.6	1307
	1974	23.7	4.5	0.5	1.1	2.7	1171
	1981	35.3	6.4	0.1	1.7	1.2	762
Instructor	1970	16	9	—	—	—	212
	1971	29	8	—	—	—	106
	1972	34.3	9.1	0.0	1.0	0.0	99
	1973	36.6	6.0	0.0	0.9	1.2	336
	1974	37.1	10.3	0.0	0.7	0.4	272
	1981	51.9	14.8	0.0	1.9	0.0	54
TOTAL*	1970	9	3	—	—	—	2946
	1971	10	3	—	—	—	3249
	1972	12.4	3.4	0.5	0.6	1.4	2878
	1973	16.9	3.8	0.1	0.9	2.4	3726
	1974	18.5	4.9	0.2	1.0	2.2	3490
	1981	19.1	4.1	0.0	1.1	2.2	2820

*Lecturers included in total for 1970-1974

Data for 1972-74 taken from Joan R. Harris, "Women and Minorities in Sociology: Findings From Annual . SA Audit," *FOOTNOTES*, Volume 3, Number 1, January 1975.

FIELD: Psychology

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade, National Research Council, March 1973. Doctorate Recipients from United States Universities Summary Reports, 1972 -1981, National Research Council

TABLE 9-16

DOCTORATES AWARDED FROM 1920 to 1981 BY SUBFIELD OF DOCTORATE AND SEX

SUBFIELD	CY1920-FY1972			FY1973-FY1977			FY1978			FY1979-FY1980			FY1981		
	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W	Total	Women	% W
Psychology Subtotal	26,383	5,530	21.0	13,618	4,407	32.4	3,049	1,123	36.8	6,179	2,567	41.5	3,357	1,472	43.8
Clinical Psychology	6,764	1,533	22.7	5,582	1,309	23.5	1,066	419	39.3	2,162	906	41.9	1,256	555	44.2
Counseling & Guidance	1,270	272	21.4	1,167	372	31.9	272	90	33.1	613	277	45.2	351	160	45.6
Developmental & Gerontological Psychology	941	439	46.7	893	481	53.9	207	103	49.8	426	255	59.9	200	120	60.0
Educational Psychology	1,629	376	23.1	628	222	35.4	144	54	37.5	299	134	44.8	180	77	42.8
School Psychology[1]	393	111	28.2	593	256	43.2	125	58	46.4	302	143	47.4	133	73	54.9
Exper. Comparative Physiological Psychology[2]	3,076	415	13.5							839	243	29.0	395	130	32.9
Experimental Psychology[2]	3,042	513	16.9	1,738	448	25.8	300	85	28.3	600	180	30.0	282	93	33.0
Comparative Psychology[2]	173	25	14.5	125	47	37.6	20	9	45.0	29	12	41.4	11	3	27.3
Physiological Psychology[2]	888	152	17.1	630	172	27.3	126	36	28.6	210	51	24.3	102	34	33.3
Human Engineering[3]	34	0	-												
Industrial & Personnel Psych.	775	38	4.9	376	114	30.3	74	15	20.3	153	36	23.5	87	22	25.3
Personality Psychology[1]	447	112	25.1	296	107	36.1	42	13	31.0	85	41	48.2	49	26	53.1
Psychometrics	344	44	12.8	105	20	19.0	15	4	26.7	46	16	34.8	27	10	37.0
Social Psychology	1,945	423	21.7	1,063	312	29.4	203	76	37.4	405	168	41.5	180	76	42.4
Psychology, General[4]	4,100	941	23.0	1,091	368	33.7	294	102	34.7	422	180	42.7	283	135	47.7
Psychology, Other	562	136	24.2	810	261	32.2	161	59	36.6	427	168	39.3	216	88	40.7

[1] Added in 1960.
[2] Experimental, Comparative & Physiological Psychology were broken out into three separate fields in 1962.
[3] Dropped in 1962. Included now with Psychology, Other.
[4] Subfields were not specified until FY 1958. Except for a few cases in earlier years, all doctorates were included in the "general" classification of their respective fields.

FIELD: Psychology

SOURCE: Earned Degrees Conferred Series, 1947-48 thru 1980-81, U.S. Office of Education (NCES)

TABLE 9-17

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1947-48 - 1980-81

	BACHELOR'S			MASTER'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1947-48 thru 1959-60	89,724	38,479	42.9	16,669	5,072	30.4
1960-61 thru 1969-70	181,611	75,916	41.8	27,052	9,063	33.5
1970-71	38,469	17,151	44.6	4,438	1,651	37.2
1971-72	43,421	20,154	46.4	5,293	2,033	38.4
1972-73	48,096	22,986	47.8	5,882	2,367	40.2
1973-74	52,256	26,407	50.5	6,616	2,630	39.8
1974-75	51,436	27,103	52.7	7,104	3,045	42.9
1975-76	50,363	27,376	54.3	7,859	3,671	46.7
1976-77	47,373	26,820	56.6	8,301	3,988	48.0
1977-78	45,057	26,540	58.9	3,194	4,263	52.0
1978-79	43,012	26,363	61.3	8,031	4,343	54.1
1979-80	42,513	26,923	63.3	7,861	4,464	56.8
1980-81	40,833	26,538	65.0	7,998	4,640	58.0
1981-82						
TOTAL	774,164	388,756	50.2	121,298	51,230	42.2

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade and Doctorate Recipients from United States Universities, Summary Reports 1971-1981 National Research Council

TABLE 9-18

DOCTORAL DEGREES BY SEX, 1920-1981

	Total Both Sexes	Women Only	% Women
CY 1920 thru FY 1959*	9,157	1,692	18.5
FY 1960 thru FY 1969	10,960	2,264	20.7
FY 1970-72	6,266	1,574	25.1
FY 1973	2,444	716	29.3
FY 1974	2,587	791	30.6
FY 1975	2,749	873	31.8
FY 1976	2,878	946	32.9
FY 1977	2,960	1,081	36.5
FY 1978	3,049	1,123	36.8
FY 1979	3,081	1,257	40.8
FY 1980	3,098	1,310	42.3
FY 1981	3,357	1,472	43.9
FY 1982			
TOTAL	52,586	15,099	28.7

*Data are aggregated on a calendar year (CY) basis from 1920 to 1957 and on a fiscal year (FY) basis from 1958 (July 1, 1957 to June 30, 1958) to the present.

FIELD: Psychology

SOURCE: "Health Service Providers in Psychology, 1978," American Psychologist, American Psychological Association, November 1981

TABLE 9-19

NUMBER AND PERCENT OF PSYCHOLOGISTS PROVIDING HEALTH SERVICES BY DEGREE, SEX AND ETHNICITY, 1978

ETHNICITY	POST BACCALAUREATE DEGREE					
	TOTAL*		MASTER'S		DOCTORATE	
	No.	%	No.	%	No.	%
White	16,987	95.8	2,636	95.2	14,250	95.9
Black	219	1.2	51	1.8	166	1.1
Hispanic	161	0.9	21	0.8	140	0.9
Asian/Pacific Islander	169	1.0	26	0.9	143	1.0
Am. Indian/Alaskan Native	37	0.2	5	0.2	31	0.2
Not Specified	161	0.9	30	1.1	130	0.9
Women	5,124	28.9	1,255	45.3	3,846	25.9
TOTAL	17,333	100.0	2,770	100.0	14,860	100.0

* Includes 103 weighted respondents who specified other or no postbaccalaureate degree.

SOURCE: 1980-81 Survey of Graduate Departments of Psychology, American Psychological Association and Council of Graduate Departments of Psychology

TABLE 9-20

CHARACTERISTICS OF FACULTY IN U.S. GRADUATE DEPARTMENTS OF PSYCHOLOGY BY SEX AND RACE/ETHNICITY, 1980-81

FACULTY CHARACTERISTICS	PH.D. DEPTS.		MASTER'S DEPTS.		ALL DEPTS.	
	No.	V %	No.	V %	No.	V %
NUMBER OF DEPARTMENTS	228		136		364	
TOTAL FACULTY	5,702	100.0	2,129	100.0	7,831	100.0
Men	4,483	78.6	1,653	77.6	6,136	78.4
Women	1,194	20.9	465	21.8	1,659	21.2
Not Specified	25	0.4	11	0.5	36	0.5
BY RACE						
White	5,376	94.3	1,967	92.4	7,343	93.8
Black	170	3.0	57	2.7	227	2.9
Hispanic	44	0.8	20	0.9	64	0.8
Asian	45	0.8	32	1.5	77	1.0
American Indian	12	0.2	1	0.0	13	0.2
Not Specified	55	1.0	52	2.4	107	1.4

FIELD: Economics

SOURCE: Earned Degrees Conferred Series, 1947-48 thru 1980-81 U.S. Office of Education (NCES)

TABLE 9-21

DEGREES AWARDED, BY SEX AND LEVEL OF DEGREE, 1947-48 - 1980-81

	BACHELOR'S			MASTER'S+		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1947-48 thru 1959-60	113,153	11,039	9.8	9,218	996	10.8
1960-61 thru 1969-70	129,286	12,254	9.5	14,411	1,509	10.5
1970-71	17,137	1,923	11.2	1,997	262	13.1
1971-72	15,336	1,817	11.8	2,225	284	12.8
1972-73	14,867	2,059	13.9	2,231	283	12.7
1973-74	14,418	2,121	14.7	2,141	303	15.2
1974-75	14,118	2,439	17.3	2,133	325	15.2
1975-76	14,854	2,914	19.6	2,093	334	15.9
1976-77	15,296	3,503	22.9	2,158	383	17.7
1977-78	15,746	3,933	25.0	1,997	396	19.8
1978-79	16,534	4,555	27.5	1,960	392	20.0
1979-80	17,954	5,430	30.2	1,823	382	21.0
1980-81	18,753	5,717	30.5	1,911	444	23.2
TOTAL	417,452	59,704	14.3	46,293	6,293	13.6

+ Does not include Agricultural Economics

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade and Doctorate Recipients from United States Universities, Summary Reports 1971-1981 National Research Council

TABLE 9-22

DOCTORAL DEGREES BY SEX, 1920-1981

	Total Both Sexes	Women Only	% Women
CY 1920 thru FY 1959*	5,872	331	5.6
FY 1960 thru FY 1969	5,282	245	4.6
FY 1970-72	2,480	162	6.8
FY 1973	907	57	6.3
FY 1974	833	73	8.8
FY 1975	867	84	9.7
FY 1976	854	92	10.7
FY 1977	809	71	8.8
FY 1978	778	91	11.7
FY 1979	780	104	13.3
FY 1980	745	101	13.6
FY 1981	807	100	12.4
TOTAL	21,014	1,511	7.2

*Data aggregated on a calendar year (CY) basis from 1920 to 1957 and on a fiscal year (FY) basis from 1958 (July 1, 1957 to June 30, 1958) to the present.

FIELD: Economics

SOURCE: Report of the Committee on the Status of Women in the Economics Profession by Elizabeth E. Bailey, American Economics Association, January 1982

TABLE 9-23

DISTRIBUTION OF ACTIVITIES OF NEW PH.D. RECIPIENTS BY SEX AND TYPE OF DEPARTMENT
ACADEMIC YEAR, 1979-80 - 1980-81

	ALL DEPARTMENTS				CHAIRMAN'S GROUP				OTHER PH.D. DEPARTMENTS			
	1979-80		1980-81		1979-80		1980-81		1979-80		1980-81	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
ALL PH.D.'S	464	100.0	447	100.0	337	100.0	280	100.0	137	100.0	167	100.0
Education	223	48.1	249	55.7	174	51.6	167	59.7	59	43.1	82	49.1
Government	45	9.7	45	10.1	33	9.8	27	9.6	12	8.8	18	10.8
Business, Banking, Research	53	11.4	47	10.5	41	12.2	36	12.9	12	8.8	11	6.6
Int'l Employment Outside U.S.	102	22.0	85	19.0	54	16.0	37	13.2	48	35.0	48	28.7
Other	41	8.8	21	4.7	35	10.4	13	4.6	6	4.3	8	4.8
MALE PH.D'S	423	100.0	394	100.0	301	100.0	245	100.0	122	100.0	149	100.0
Education	204	48.2	216	54.8	155	51.5	144	58.8	49	40.2	72	48.3
Government	41	9.7	40	10.1	30	10.0	24	9.8	11	9.0	16	10.8
Business, Banking, Research	51	12.1	41	10.4	39	13.0	31	12.6	12	9.8	10	6.7
Int'l Employment Outside U.S.	93	22.0	81	20.6	49	16.3	36	14.7	44	36.1	45	30.2
Other	34	8.0	16	4.1	28	9.3	10	4.1	6	4.9	6	4.0
FEMALE PH.D'S	41	100.0	53	100.0	36	100.0	35	100.0	15	100.0	18	100.0
Education	19	46.3	33	62.3	19	52.8	23	65.7	10	66.7	10	55.6
Government	4	9.7	5	9.4	3	8.3	3	8.6	1	6.7	2	11.1
Business, Banking, Research	2	4.9	6	11.3	2	5.6	5	14.3	-	-	1	5.5
Int'l Employment Outside U.S.	9	22.0	4	7.6	5	13.9	1	2.9	4	26.6	3	16.7
Other	7	17.1	5	9.4	7	19.4	3	8.5	-	-	2	11.1

FIELD: Economics

SOURCE: Committee on the Status of Women in the Economics Profession, Unpublished Data, 1981

TABLE 9-24

CHARACTERISTICS OF WOMEN ECONOMISTS, 1980

	HIGHEST DEGREE		EMPLOYMENT STATUS		TYPE OF EMPLOYER	
	No.	%	No.	%	No.	%
Bachelor's	186	10.9				
Master's	463	27.2				
A.B.D.	226	13.3				
Ph.D.	817	47.9				
Other	13	0.8				
Employed Full Time			1,381	81.0		
Employed Part Time			170	10.0		
Student			82	4.8		
Other			72	4.2		
Academic					840	49.3
Government/Non-Profit					303	17.8
Business/Industry					348	20.4
Other/Unknown					214	12.5
TOTAL	1,705	100.0	1,705	100.0	1,705	100.0

SOURCE: "A Report on the Supply of Black Economists," by Margaret C. Simms and David H. Swinton, The Review of Black Political Economy, Vol. 11, No. 2, Winter 1981

TABLE 9-25

PH.D. DEGREES RECEIVED IN ECONOMICS OR ECONOMETRICS BY CITIZENSHIP AND ETHNIC IDENTIFICATION

Year	Total	Non U.S. Citizens	U.S. Citizens	White	Black	Hispanic*	Asian	American Indian	Other/ Unknown
1979	781	201	580	478	9	10	29	2	52
1978	769	238	531	474	4	4	11	2	36
1977	820	256	564	517	13	2	5	1	26
1976	870	250	620	563	7	1	8	2	39
1975	872	231	641	589	9	3	6	2	32
1974	820	242	578	530	5	5	6	2	30
6-Yr. Total	4,932	1,418	3,514	3,151	47	25	65	11	215

* Hispanics may be of any race. Their numbers, however, are not included in the racial group totals.

FIELD: Economics

SOURCE: Report of the Committee on the Status of Women in the Economics Profession by Elizabeth E. Barley, American Economics Association, January 1982

TABLE 9-26

DISTRIBUTION OF FULL-TIME FACULTY BY TYPE OF INSTITUTION, ACADEMIC RANK AND SEX, 1979-80 - 1980-81

	CHAIRMAN'S GROUP*						OTHER PH.D.						ONLY M.A. DEPARTMENTS						ONLY B.A. DEPARTMENTS					
	1979-80			1980-81			1979-80			1980-81			1979-80			1980-81			1979-80			1980-81		
		Women			Women			Women			Women			Women			Women			Women			Women	
	Tot.	No.	%	Tot.	No.	%	Tot.	No.	%	Tot.	No.	%	Tot.	No.	%	Tot.	No.	%	Tot.	No.	%	Tot.	No.	%
Existing																								
Professor	530	9	1.7	600	8	1.3	448	9	2.0	49	10	2.0	239	13	5.4	240	7	2.9	237	17	7.2	307	20	6.5
Assoc. Prof.	188	10	5.3	221	11	5.0	300	10	3.3	305	15	5.0	230	25	10.9	221	23	10.4	251	8	3.2	324	20	6.2
Ass't. Prof.	248	34	13.7	325	41	12.6	242	32	13.2	251	31	12.6	214	26	12.2	248	23	9.4	287	34	11.9	379	41	10.8
Instructor	51	12	23.5	33	7	21.2	53	4	7.5	32	5	15.6	29	7	24.1	45	15	33.3	96	20	20.8	133	29	21.8
Other	21	3	14.3	38	10	26.3	22	3	13.6	26	4	15.4	5	4	80.0	4	3	75.0	13	1	7.7			
New Hires																								
Professor	8	-	-	6	-	-	4	-	-	4	-	-	4	1	25.0	5	-	-	3	1	33.3	10	-	-
Assoc. Prof.	7	1	14.3	10	1	10.0	10	-	-	11	2	18.1	5	1	20.0	12	1	8.3	11	1	9.1	19	2	10.5
Ass't. Prof.	59	7	11.9	58	6	10.3	47	5	10.6	38	7	18.4	49	5	10.2	66	9	13.6	66	8	12.1	85	12	14.1
Instructor	19	-	-	22	5	22.7	25	4	16.0	8	2	25.0	15	3	20.0	14	4	28.5	54	15	27.8	61	12	19.7
Other	4	-	-	7	-	-	-	-	-	10	1	10.0	4	3	75.0	3	2	66.7	3	1	33.3	1	-	-
Promoted to Rank (1978-79)																								
Professor	14	1	7.1	16	-	-	24	-	-	33	-	-	15	1	6.7	21	2	9.5	18	1	5.6	29	5	17.2
Assoc. Prof.	27	3	11.1	26	1	3.9	29	3	10.3	26	2	7.7	31	7	22.6	19	2	10.5	25	-	-	46	5	10.9
Ass't. Prof.	4	-	-	6	1	16.7	8	2	25.0	3	-	-	5	2	40.0	1	-	-	12	3	25.0	17	5	29.4
Tenured at Rank (1978-79)																								
Professor	1	-	-	6	-	-	2	-	-	1	-	-	-	-	-	3	-	-	-	-	-	4	2	50.0
Assoc. Prof.	18	1	5.6	21	1	5.0	20	1	5.0	17	1	5.9	9	1	11.1	13	1	7.7	22	1	4.6	27	3	11.1
Ass't. Prof.	2	-	-	1	-	-	2	-	-	1	-	-	6	1	16.7	-	-	-	6	-	-	10	1	10.0
Not Rehired																								
Professor	20	-	-	23	-	-	5	-	-	*1/	-	-	10	-	-	2	-	-	8	-	-	5	-	-
Assoc. Prof.	13	1	7.7	13	-	-	12	1	8.3	7	-	-	8	-	-	8	-	-	10	-	-	16	5	31.3
Ass't. Prof.	29	5	17.2	34	7	20.6	23	2	8.7	28	4	14.2	32	5	15.6	26	3	11.5	45	4	8.9	49	5	10.2
Instructor	5	-	-	-	-	-	12	3	25.0	6	-	-	9	2	22.2	7	2	28.6	21	2	9.5	26	4	15.4
Other	4	-	-	9	2	22.2	1	-	-	8	3	37.5	1	1	100.0	1	1	100.0	3	-	-	1	-	-

* Consists of 65 departments that focus on research and training of Ph.D.'s in economics.

FIELD: Economics

SOURCE: Report of the Committee on the Status of Women in the Economics Profession by Elizabeth E. Barley, American Economics Association, January 1982

TABLE 9-27

PREVIOUS ACTIVITY OF NEW HIRES AND CURRENT ACTIVITY OF THOSE NOT REHIRED BY TYPE OF INSTITUTION AND SEX, 1979-80 AND 1980-81

	PREVIOUS ACTIVITY OF NEW HIRES								CURRENT ACTIVITY OF NOT REHIRED							
	1979-80				1980-81				1979-80				1980-81			
	Male		Female		Male		Female		Male		Female		Male		Female	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Chairman's Group*	90	100.0	8	100.0	85	100.0	34	100.0	67	100.0	7	100.0	65	100.0	8	100.0
Faculty	21	23.4	3	37.5	26	31.3	11	34.4	37	55.2	2	28.6	38	58.4	5	62.5
Student	56	62.2	5	62.5	50	60.2	20	62.5	-	-	-	-	1	1.5	1	12.5
Government	3	3.3	-	-	2	2.4	-	-	5	7.5	2	28.6	11	17.0	2	25.0
Business, Banking, Research	4	4.4	-	-	4	4.8	-	-	11	16.4	2	28.6	5	7.7	-	-
Other	6	6.7	-	-	3	1.3	1	3.1	14	20.9	1	14.2	10	15.4	-	-
Other Ph.D.	70	100.0	17	100.0	75	100.0	18	100.0	42	100.0	9	100.0	50	100.0	14	100.0
Faculty	23	32.9	3	17.6	31	41.3	1	5.5	20	47.6	4	44.5	23	46.0	2	14.3
Student	40	57.1	14	82.5	32	42.7	14	77.7	2	4.8	-	-	3	6.0	4	28.6
Government	1	1.4	-	-	3	4.0	-	-	5	11.9	1	11.1	9	18.0	3	21.4
Business, Banking, Research	1	1.4	-	-	5	6.7	2	11.3	7	16.7	2	22.2	8	16.0	-	-
Other	5	7.4	-	-	4	5.3	1	5.5	8	19.0	2	22.2	7	14.0	5	35.7
M.A. Departments	82	100.0	18	100.0	88	100.0	16	100.0	55	100.0	12	100.0	44	100.0	5	100.0
Faculty	31	37.7	3	16.7	37	42.0	6	37.5	24	43.6	5	41.7	26	59.1	3	60.0
Student	32	39.0	9	50.0	37	42.0	10	62.5	10	18.2	2	16.7	-	-	1	20.0
Government	3	3.7	2	11.1	4	4.6	-	-	3	5.5	-	-	4	9.1	-	-
Business, Banking, Research	13	15.9	3	16.7	5	5.7	-	-	7	12.7	1	8.3	8	18.2	1	20.0
Other	3	3.7	1	5.5	5	5.7	-	-	11	20.0	4	33.3	6	13.6	-	-
B.A. Departments	140	100.0	34	100.0	180	100.0	28	100.0	72	100.0	5	100.0	93	100.0	10	100.0
Faculty	44	31.4	9	26.5	64	35.6	11	39.3	41	56.9	3	60.0	48	51.6	5	50.0
Student	66	47.2	21	61.7	79	43.8	13	46.4	3	4.2	1	20.0	12	12.9	1	10.0
Government	3	2.2	-	-	13	7.3	-	-	5	7.0	-	-	13	13.4	-	-
Business, Banking, Research	20	14.2	2	5.9	18	10.0	3	10.7	14	19.4	-	-	7	18.9	1	10.0
Other	7	5.0	2	5.9	6	3.3	1	3.6	9	12.5	1	20.0	3	3.2	3	30.0

* Consists of 65 departments that focus on research and training of Ph.D.'s in economics.

FIELD: Political Science

SOURCE: Earned Degrees Conferred Series, 1947-48 through 1980-81 U. S. Office of Education (NCES)

TABLE 9-28

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1947-48 - 1980-81

	BACHELOR'S			MASTER'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1947-48 thru 1959-60	74,124	13,777	18.6	8,103	1,233	15.2
1960-61 thru 1969-70	154,982	33,327	21.5	14,381	2,764	19.2
1970-71	27,636	5,564	20.1	2,318	479	21.4
1971-72	28,317	5,338	18.8	2,451	502	20.5
1972-73	30,246	5,919	19.6	2,399	480	20.0
1973-74	30,932	6,199	20.4	2,448	456	18.6
1974-75	29,314	6,610	22.5	2,333	476	20.4
1975-76	28,515	7,205	25.3	2,192	473	21.6
1976-77	26,411	7,444	28.2	2,222	504	22.6
1977-78	26,245	8,168	31.1	2,070	547	26.4
1978-79	25,817	8,620	33.4	2,038	558	27.4
1979-80	25,658	9,212	35.9	1,938	515	26.6
1980-81	24,977	9,181	36.8	1,875	533	28.4
TOTAL	533,174	126,564	23.7	46,768	9,520	20.4

SOURCE: Doctorates Awarded from 1920-1977 by Subfield of Doctorate, Sex and Decade and Doctorate Recipients from United States Universities, Summary Reports 1971-1981 National Research Council

TABLE 9-29

DOCTORAL DEGREES BY SEX, 1920-1981

	Total Both Sexes	Women Only	% Women
CY 1920 thru FY 1959*	3,017	203	6.7
FY 1960 thru FY 1969	3,122	257	8.2
FY 1970-72	2,008	223	11.1
FY 1973	780	93	11.9
FY 1974	775	115	14.8
FY 1975	749	121	16.2
FY 1976	628	106	16.9
FY 1977	613	102	16.6
FY 1978	603	118	19.6
FY 1979	522	95	18.2
FY 1980	505	102	20.2
FY 1981	445	96	21.6
TOTAL	13,767	1,631	11.9

* Data are aggregated on a calendar year (CY) basis from 1920 to 1957 and fiscal year (FY) basis from 1958 (July 1, 1957 to June 30, 1958) to the present.

FIELD: Political Science

SOURCE: "Political Science Degrees Awarded and Graduate Students Enrolled: 1982 Update," and "Finding Jobs: Placement of Political Scientists, 1981-82," by Robert J. P. Hanck, PS Summer 1982 and Winter 1983, American Political Science Association

TABLE 9-30

TOTAL ENROLLMENTS IN PH.D. PROGRAMS IN POLITICAL SCIENCE, 1973-74 - 1981-82

Year	Total	Women		Black		Foreign	
1981-82	5,491	1,346	25%	319	6%	1,211	23%
1980-81	5,756	1,415	25%	373	6%	1,212	21%
1979-80	5,888	1,384	24%	406	7%	1,146	21%
1978-79	5,742	1,258	22%	432	8%	948	17%
1977-78	5,737	1,278	22%	413	7%	819	14%
1976-77	5,462	1,209	22%	402	7%	813	15%
1975-76	6,150	1,475	24%	435	7%	*	
1974-75	6,150	1,250	20%	435	7%	*	
1973-74	6,450	*		*		*	

*Figures not available.

TABLE 9-31

FIRST-TIME ENROLLMENTS IN PH.D. PROGRAMS IN POLITICAL SCIENCE, FALL 1969-1981

	Total	Women		Black	
Fall, 1981	1,042	301	29%	78	8%
Fall, 1980	1,068	301	28%	104	9%
Fall, 1979	1,100	305	28%	101	9%
Fall, 1978	1,051	255	24%	102	10%
Fall, 1977	1,182	270	23%	111	10%
Fall, 1976	1,064	274	26%	100	9%
Fall, 1975	1,174	270	23%	129	11%
Fall, 1974	1,443	342	24%	131	9%
Fall, 1973	1,414	*		*	
Fall, 1972	1,576	*		*	
Fall, 1971	1,695	*		*	
Fall, 1970	2,138	*		*	
Fall, 1969	2,487	*		*	

*Figures not available.

FIELD: Political Science

SOURCE: "Political Science Degrees Awarded and Graduate Students Enrolled: 1982 Update," and "Finding Jobs: Placement of Political Scientists, 1981-82," by Robert J. P. Hanck, PS Summer 1982 and Winter, 1983, American Political Science Association

TABLE 9-32

PLACEMENT SUCCESS OF POLITICAL SCIENTISTS BY FIELDS OF SPECIALIZATION AND SEX 1980, 1981 AND 1982

	Total			Men			Women		
	1980	1981	1982	1980	1981	1982	1980	1981	1982
	Placement Success*								
American Government	74	85	71	75	85	73	71	83	66
Public Policy	64	94	81	61	100	87	78	75	67
Comparative/Area Studies	55	59	52	55	60	46	55	56	74
International Relations	64	57	52	62	54	51	80	79	61
Public Administration	97	91	100	96	100	100	100	50	67
Political Theory	57	68	42	47	65	41	65	78	57
Methodology	50	81	88	60	83	100	50	100	100
Other	100	100	100	100	43	100	100	100	100
	Percentage of Those Placed**								
American Government	29	30	30	28	28	23	32	35	7
Public Policy	7	8	10	6	9	7	8	7	2
Comparative/Area Studies	22	21	20	22	20	14	21	22	5
International Relations	17	13	19	15	13	15	14	13	4
Public Administration	7	10	25	7	11	4	6	5	2
Political Theory	11	12	9	10	13	8	13	11	1
Methodology	1	3	2	1	3	2	0	4	—
Other	7	2	5	8	2	4	5	2	1

*Placement success measures number placed in a field as a percentage of total candidates in each of the respective fields.

**Percentage of those placed measures the total number placed in a particular field as a percentage of the total number placed in all fields.

SOURCE: "Placement of Political Scientists, 1980-81," by Sheilah Mann, PS, Winter 1982, American Political Science Association

TABLE 9-33

PLACEMENT OF POLITICAL SCIENTISTS BY TYPE OF HIRING INSTITUTION AND SEX, 1980, 1981 AND 1982

	Total			Men			Women		
	1980	1981	1982	1980	1981	1982	1980	1981	1982
Ph.D. department	31	36	29	32	36	29	38	35	31
M.A. department	17	18	20	16	18	20	20	13	18
Undergraduate political science department	22	25	25	21	24	26	26	33	21
Undergraduate social science department	4	2	4	4	2	3	5	—	6
Two-year college	2	2	3	1	2	3	2	?	6
Non-academic	24	18	19	24	18	20	19	18	17
Total	100	101	100	99	100	101	100	100	99

FIELD: Political Science

SOURCE: "Placement of Political Scientists, 1980-81, " by Sheilah Mann, PS, Winter 1982, American Political Science Association

TABLE 9-34

PLACEMENT OF JOB CANDIDATES IN POLITICAL SCIENCE
1980 - 1982*

	Total	Men	Women
Number of Firm Candidates			
1980	779	630	149
1981	667	596	101
1982	611	485	126
Number Placed			
1980	560	451	109
1981	511	437	75
1982	379	298	81
Placement Success (percent)			
1980	68	68	68
1981	73	73	73
1982	62	61	64
Percent in Temporary Positions			
1980	33	32	35
1981	28	28	28
1982	36	37	36

TABLE 9-35

DEGREE COMPLETION AND PLACEMENT SUCCESS OF POLITICAL SCIENTISTS
1980 - 1982

	Placement Success*						Percentage of Those Placed**					
	ABD			Ph.D.			ABD			Ph.D.		
	1980	1981	1982	1980	1981	1982	1980	1981	1982	1980	1981	1982
Total	63	66	55	74	81	66	76	44	41	54	56	59
Men	61	63	54	75	83	63	43	41	75	57	59	79
Women	70	79	58	72	70	79	57	54	25	43	46	21

*Placement success measures number placed within each category as a percentage of the total candidates within each category.

**Percentage of those placed measures the number placed within each category as a percentage of the total number placed in all categories.

CHAPTER 10

ARTS, HUMANITIES AND EDUCATION

ARTS AND HUMANITIES

Doctoral Awards 262

Linguistics Degrees Awarded 263

EDUCATION

Degrees Awarded 265

Federal Workers 265

FIELD: Arts and Humanities

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade, National Research Council, March 1973.
Doctorate Recipients from United States Universities Summary Reports, 1972-1981, National Research Council

TABLE 10-1

DOCTORATES AWARDED FROM 1920 TO 1981 BY SUBFIELD OF DOCTORATE AND SEX

	CY1920-FY1972			FY1973-FY1977			FY1978			FY1979-FY1980			FY1981		
	Total	Women	% Women	Total	Women	% Women	Total	Women	% Women	Total	Women	% Women	Total	Women	% Women
Arts & Humanities Subtotal	60,012	12,574	21.0	24,858	8,119	32.7	4,235	1,598	37.7	8,006	3,122	39.0	3,745	1,547	41.3
History, American, European, General & Other	15,556	2,076	13.3	5,480	1,066	19.5	828	185	22.3	1,524	392	25.7	665	213	32.8
History & Philosophy of Sci.[1]	74	10	13.5	154	68	44.2	25	7	28.0	49	16	32.7	26	5	19.2
Amer. & Eng. Lang. & Lit.[2]	11,782	2,715	23.0												
American Lang. & Lit.[2]	779	235	30.2	1,229	460	37.4	212	97	45.8	416	190	45.7	146	80	54.8
English Lang. & Lit.[2]	3,867	1,236	32.0	5,134	2,101	40.9	815	386	47.4	1,446	701	48.5	670	343	51.2
German Lang. & Lit.[3]	1,142	335	29.3	847	394	46.5	103	55	53.4	215	115	53.5	89	49	55.1
French Lang. & Lit.[3]	1,529	661	43.2	1,239	771	62.2	183	125	68.3	349	241	69.1	167	118	70.7
Spanish, Portuguese Lang. & Literature	1,338	451	33.8	1,151	496	43.1	173	95	55.0	326	179	54.9	184	93	50.5
Linguistics	1,502	358	23.8	910	343	37.7	175	65	37.1	337	152	45.1	176	78	44.3
Italian Lang. & Lit.[3]	108	34	31.5	117	43	36.8	23	14	60.9	30	11	36.7	16	9	56.3
Russian Lang. & Lit.[3]	273	85	31.1	394	123	31.2	52	23	44.2	74	49	66.2	27	13	48.1
Other Slavic Lang. & Lit.[3]	48	11	22.9												
All Other Modern Languages[3]	5,161	1,330	25.8	552	161	29.2	103	37	36.0	209	77	36.8	96	37	38.5
Classical Lang. & Lit.[4]	2,236	682	30.5	405	142	35.1	67	26	38.8	110	34	30.9	62	24	38.7
Philosophy	5,133	631	12.3	1,909	310	16.2	289	50	17.3	531	110	20.7	277	5	9.1
Speech as a Dramatic Art[5]	4,357	717	16.5	670	188	28.1	69	30	43.5	117	41	35.0	37	12	32.4
Archeology	314	114	36.3	109	48	44.0	32	16	50.0	60	26	43.3	28	13	46.4
Art, Fine & Applied[6]	889	246	27.7	20	4	20.0									
Art, History & Criticism[6]	346	155	44.8	678	351	51.8	151	93	61.6	310	187	60.3	157	112	71.3
Music	2,501	348	13.9	1,866	413	22.1	370	106	28.6	819	226	27.6	368	108	29.3
Arts & Humanities, General[7]	415	57	13.7	117	46	39.3	25	15	60.0	32	17	53.1	23	9	39.1
Arts & Humanities, Other	660	176	26.7	630	271	43.0	51	22	43.1	103	47	45.6	48	22	45.8
American Studies[8]				242	79	32.6	82	28	34.1	165	61	37.0	87	45	51.7
Religion[9]				888	289	32.5	191	28	14.7	364	58	15.9	161	29	18.0
Comparative Literature[10]				308	165	53.6	114	68	59.6	250	116	46.4	132	74	56.1
Theatre & Theatre Critic.[11]										190	76	40.0	103	32	31.1

[1] Added in 1970. [2] In 1968, this specification was separated. [3] Shown as "Modern Foreign Language, Unspecified" until 1965; as "Other Languages" in 1979.
[4] Name changed from "Foreign Language & Lit., Classical" in 1966. [5] Originally specified as "Speech " In 1962, "Dramatic Arts" was added.
[6] In 1968, "Art, Fine & Applied" was broken out into "Art, Applied" & "Art, Hist. & Crit."
[7] Subfields were not specified until FY 1958. [8] Added in 1975. Added in 1973. [10] Added in 1976. [11] Added in 1979.

FIELD: Linguistics

SOURCE: Earned Degrees Conferred Series, 1947-48 through 1980-81 U. S. Office of Education (NCES)

TABLE 10-2

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1947-48 - 1980-81

	BACHELOR'S			MASTER'S		
	Total Both Sexes	Women Only	% Women	Total Both Sexes	Women Only	% Women
1947-48 thru 1959-60*	171	76	44.4	287	113	39.4
1960-61 thru 1969-70	1,127	575	51.0	2,066	859	42.8
1970-71	254	171	67.3	352	179	50.8
1971-72	296	186	62.8	373	199	53.4
1972-73	443	290	65.5	452	228	50.4
1973-74	431	315	73.1	455	248	54.5
1974-75	434	305	70.3	506	279	55.1
1975-76	534	371	69.5	523	313	59.8
1976-77	564	399	70.7	552	326	59.1
1977-78	596	408	68.5	522	313	60.0
1978-79	585	408	69.7	503	297	59.0
1979-80	553	418	75.6	522	315	60.3
1980-81	551	408	74.0	498	307	61.6
TOTAL	6,539	4,330	66.2	7,611	3,981	52.3

*Includes data beginning in 1955-56 when linguistics was identified as a separate field.

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade and Doctorate Recipients from United States Universities, Summary Reports 1971-1981 National Research Council

TABLE 10-3

DOCTORAL DEGREES BY SEX, 1920-1981

	Total Both Sexes	Women Only	% Women
CY 1920 thru FY 1959*	293	68	23.2
FY 1960 thru FY 1969	738	167	22.6
FY 1970-72	471	123	26.1
FY 1973	207	65	31.4
FY 1974	167	68	40.7
FY 1975	194	70	36.1
FY 1976	152	70	46.1
FY 1977	190	73	38.4
FY 1978	175	65	37.1
FY 1979	155	77	49.7
FY 1980	182	75	41.2
FY 1981	176	78	44.3
TOTAL	3,100	999	32.2

FIELD: Education

SOURCE: Doctorates Awarded from 1920 to 1971 by Subfield of Doctorate, Sex and Decade, National Research Council, March 1973.
Doctorate Recipients from United States Universities Summary Reports, 1972 -1981, National Research Council

TABLE 10-4

DOCTORATES AWARDED FROM 1920 TO 1981 BY SUBFIELD OF DOCTORATE AND SEX

	CY1920-FY1972			FY1973-FY1977			FY1978-FY1979			FY1980			FY1981		
	Total	Women	% Women	Total	Women	% Women	Total	Women	% Women	Total	Women	% Women	Total	Women	% Women
Education, Total [1]	69,377	13,878	20.0	37,033	11,136	30.1	14,560	5,952	40.9	7,576	3,375	44.5	7,489	3,534	47.2
Elementary Education, Gen. [2]	2,644	1,096	41.5	1,240	703	56.7	385	275	71.4	163	112	68.7	180	120	66.7
Secondary Education, Gen. [2]	2,212	375	17.0	973	268	27.5	287	121	42.2	168	65	38.7	136	60	44.1
Higher Education [3]	522	96	18.4	3,053	729	23.9	1,293	485	37.5	684	272	39.8	671	279	41.6
Adult Ed. & Extension Ed. [3]	251	52	20.7	779	191	24.5	367	150	40.9	237	93	39.2	233	108	46.4
Foundations, Soc., Philosophy [4]	2,361	535	22.7	1,056	308	29.2	478	150	31.4	214	88	41.1	208	87	41.8
Educational Psychology [4]	3,165	924	29.2	2,402	952	39.6	860	396	46.0	474	241	50.8	445	236	53.0
Educational Meas. & Stat. [4]	691	110	15.9	542	150	27.7	201	81	40.3	89	33	37.1	90	41	45.6
Curriculum & Instructions [3]	547	188	34.4	3,800	1,446	38.1	1,680	761	45.3	830	429	51.7	814	448	55.0
Educational Admin. & Supvr. [5]	12,610	1,053	8.4	7,544	1,188	15.7	2,941	788	26.8	1,529	509	33.3	1,653	614	37.1
Guidance Counseling & Student Personnel [4]	4,909	1,046	21.3	3,412	1,142	33 5	1,167	512	43.9	593	266	44.9	549	253	46.1
Special Education [4]	1,918	535	27.9	1,499	619	41.3	627	334	53.3	346	205	59.2	313	195	62.3
Audio-Visual Media [4]	624	67	10.7	449	78	17 4	183	55	30.1	74	22	29.7	77	29	37.7
Teaching Field - Agriculture [2]	459	8	1.7	138	2	1.4	59	2	3.4	39	2	5.1	42	4	9.5
Teaching Field - Arts [6]	369	103	27.9	273	106	38.8	98	55	56.1	45	21	46.7	63	36	57.1
Teaching Field - Business [6]	685	201	29.3	408	142	34.8	128	50	39.1	52	26	50.0	50	22	44.0
Teaching Field - English [6]	563	164	29.1	431	204	47.3	160	91	56.9	74	43	58.1	63	39	61.9
Teaching Field - Foreign Lang. [6]	168	49	29.2	152	73	48 0	75	40	53.3	36	18	50.0	28	18	64.3
Teaching Field - Home Econ. [6]	256	248	96.9	169	164	97.0	55	53	96.4	27	27	100.0	25	25	100.0
Teaching Field - Ind. Arts [6]	527	2	0.4	257	5	1.9	72	1	1.4	27	2	7.4	27	2	7.4
Teaching Field - Mathematics [6]	908	150	16.5	546	140	25.6	142	57	40.1	74	30	40.5	62	25	40.3
Teaching Field - Music [6]	906	125	13.8	539	131	24 3	174	60	34.5	110	34	30.9	76	28	36.8
Speech Education [7]				55	27	49.1	36	20	55.6	10	9	90.0	12	9	75.0
Reading Education [8]				246	171	69.5	293	231	78.8	161	125	77.6	193	157	81.3
Physical Education, Health & Recreation	2,861	783	27.4	1,723	513	29.8	670	252	37.6	365	150	41.1	367	149	40.6
Science Education [2]	1,574	306	19.4	656	123	18.8	194	49	25.3	96	26	27.1	107	36	33.6
Social Science Education [6]	500	90	18.0	289	69	23.9	111	36	32.4	50	22	44.0	49	15	30.6
Vocational Education [6]	461	26	5.6	882	166	18.8	399	128	32.1	229	95	41.5	213	78	36.6
Other Teaching Fields [9]	750	309	41.2	569	325	57.1	98	69	70.4	32	8	25.0	32	15	46.9
Education, General [1]	24,816	4,896	19.7	1,730	587	33.9	846	372	44.0	440	200	45.5	407	202	49.6
Education, Other [4]	1,117	341	30.5	975	444	45.5	481	278	57.8	195	100	51.3	191	102	53.4

[1] "Education" originally listed under a single code. In 1960, single code broken out into 16 subfields. Cases coded under signed "Education" code prior to 1960 were added to "Education, General." The 7 codes used prior to 1962 were converted.
[2] Added in 1960. [3] Added in 1971. [4] Added in 1962; dropped in 1976. [5] Added in 1960 as "Administration." Changed in 1962 to "Admin. & Supervision."
[6] Added in 1963. [7] Added in 1975. [8] Added in 1976.
[9] Added in 1963 as "Other Special Field.." In 1968 changed to "Other Fields (meaning other teaching fields).

FIELD: Education

SOURCE: Earned Degrees Conferred Series, 1970-71 - 1980-81 U.S. Office of Education, (NCES)

TABLE 10-5

DEGREES AWARDED BY SEX AND LEVEL OF DEGREE, 1970-71 TO 1980-81

ACADEMIC YEAR	BACHELOR'S			MASTER'S			DOCTORATE		
	Total	Women	Women	Total	Women	Women	Total	Women	Women
1970-71	177,638	132,236	74.4	89,067	50,020	56.2	6,398	1,355	21.2
1971-72	192,368	142,492	74.0	98,280	56,355	57.3	7,041	1,660	23.6
1972-73	195,640	143,816	73.5	105,646	61,450	58.2	7,314	1,813	24.8
1973-74	186,623	137,088	73.5	112,739	67,553	59.9	7,293	1,977	27.5
1974-75	168,749	123,703	73.3	120,233	74,733	62.2	7,443	2,296	30.8
1975-76	156,528	114,026	72.8	128,410	82,591	64.3	7,769	2,593	33.4
1976-77	143,658	103,740	72.2	126,375	83,201	65.8	7,955	2,769	34.8
1977-78	137,742	99,842	72.5	118,957	80,548	67.7	7,586	2,956	39.0
1978-79	127,853	93,568	73.2	111,834	76,734	68.6	7,731	3,263	42.2
1979-80	120,680	89,214	73.9	103,720	72,762	70.2	7,940	3,521	44.3
1980-81	108,265	81,196	75.0	98,381	70,301	71.5	7,900	3,736	47.3
TOTAL	1,715,744	1,260,921	73.5	1,213,642	776,248	64.0	82,370	27,939	33.9

SOURCE: Federal Civilian Workforce Statistics, Equal Employment Opportunity Statistics, U.S. Office of Personnel Management

TABLE 10-6

NUMBER AND PERCENT OF FEDERAL WORKERS EMPLOYED IN EDUCATION BY OCCUPATIONAL TITLE, SEX AND MINORITY STATUS, NOVEMBER 30, 1980

OCCUPATION SERIES	ALL EMPLOYEES			TOTAL MINORITY				BLACK		HISPANIC		NATIVE AMERICAN		ASIAN		ALL OTHERS	
	Total	Women	% W	Total	%	Women	%	No.	%	No.	%	No.	%	No.	%	No.	%
Gen. Education & Training	780	275	35.3	137	17.6	53	6.8	61	7.8	11	1.4	59	7.6	6	.8	643	82.4
Education & Vocat. Train.	14,630	7,464	51.0	2,723	18.6	1,379	9.4	825	5.6	212	1.4	1,513	10.3	173	1.2	11,907	81.4
Ed. Research & Program	1,107	442	39.9	297	26.8	157	14.2	238	21.5	40	3.6	11	1.0	8	.7	810	73.2
Public Health Education	69	30	43.5	14	20.3	8	11.6	6	8.7	2	2.9	6	8.7	0	0.0	55	79.7
TOTAL	16,586	8,211	49.5	3,171	19.1	1,597	9.6	1,130	6.8	265	1.6	1,589	9.6	187	1.1	13,415	80.9

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RECRUITMENT RESOURCES

American Studies

The Women's Committee of the American Studies Association has prepared a directory of about 250 women listed by field name, institutional affiliation, rank, area of expertise, teaching and administrative experience, publications and other notable career aspects. Included are the social sciences, writing, literature, music, art, architecture, mass media, popular culture, education and library science. The roster is available from Roberta K. Gladowski, American Studies Association, 4025 Chestnut Street/T7, University of Pennsylvania, Philadelphia, PA 19104. Women wishing to be added to the roster should submit their vita to the same address.

Architecture

The Alliance of Women in Architecture is gathering the names and addresses of women architects and students of architecture. Contact AWA, 18 East 13th Street, New York, NY 10003.

Asian Studies

The Association for Asian Studies has a Committee on the Role of Women in Asian Studies. Write the Committee c/o the Association for Asian Studies, One Lane Hall, University of Michigan, Ann Arbor, MI 48109.

Banking

The National Association of Bank Women has prepared a yearbook register of over 20,000 women in all areas within the profession, used for recommendations for consultant appointments, speaking engagements and personal reference. Contact Ms. Sharon Pierce, Executive Manager, NABW, 111 E. Wacker Drive, Chicago, IL 60601.

Biochemistry/Biomedical Sciences

Biochemistry/Biomedical Sciences Registry is a fully computerized registry of women and minority group biomedical scientists for use as an aid in job placement and appointments to committees and review boards. Includes name, address, age, degree(s) and year, institution, field and four sub-specialties, publications, salary range desired, availability for scientific, academic, administrative or industrial job, experience, awards, etc. Information updated every two years. Users contact: Incenter Corporation, 2116 Noudain Street, Philadelphia, PA 19146. Registrants contact: Dr. Helen C. Davies, American Society of Biological Chemists, 9560 Rockville Pike, Bethesda, MD 20014.

Chemistry

The American Chemical Society has a general and a confidential employment service. Candidates registered with the services may indicate minority status on a voluntary basis. Identification within a given search will be provided an employer for affirmative action needs. Approximately 600-700 candidates are registered at any given time. About 250 have indicated they are female and/or members of minority groups. When minorities and/or women appear in any search, they are now automatically identified. Registration for the open service is free to ACS members and student affiliates. Because of extra handling required, an annual listing fee of $25 is charged for the confidential service. The minimum charge for any search service is $25. If records of candidates are supplied for review, the cost is $50. Contact Employment Aids Office, American Chemical Society, 1155 - 16th Street, N.W., Washington, DC 20036. (Tel. 202-872-4528).

In the fall of 1974, the Women Chemists Committee of the American Chemical Society began an informal referral service to facilitate academic job placement. About 100 women ACS members receive announcements of job openings requiring a Ph.D. There is no fee. Contact: Women Chemists Committee, American Chemical Society, 1155 - 16th Street, N.W., Washington, DC 20036. (Tel. 202-872-4456).

Communication

The Employment Clearinghouse is based in the Office of Community Affairs of the National Association of Broadcasters in Washington, DC and is supported by financial assistance from broadcasting networks and stations. ECH coordinates its operations with broadcast skills banks located in several cities throughout the United States. ECH offers the following services primarily to minorities and women interested in careers in broadcasting: Initial Career Counseling, Broadcast Job Referral Services, Information on Broadcast Careers and Follow-up Counseling. Contact: Employment Clearinghouse, Office of Community Affairs, National Association of Broadcasters, 1771 N Street, N.W., Washington, DC 20036.

Economics

The Committee on the Status of Women in the Economics Profession maintains a roster of women economists which includes the address, publications record, highest degree, school and date of highest degree, current position and employer, primary and secondary specialties, and current availability for each woman economist listed. An annual directory with quarterly updates is based upon the roster. Entries in the directory are indexed by specialty and by geographic location. Economic specialties are indexed by specialty and by geographic location. Economic specialties are coded as listed in the Journal of Economic Literature, with further verbal description. The charge for the directory is $20 to nonprofit institutions, and $30 to others, payable to the Committee on the Status of Women in the Economics Profession. Requests should be sent to Nancy D. Ruggles, ISPS, Box 16A, Yale Station, New Haven, CT 06520.

Engineering

The Society of Women Engineers has a roster of the members of the society including name, address, occupation, business and home phone numbers. All areas of the profession are represented, but it is used for membership services only. Job openings may be advertised in the SWE Newsletter which is subscribed to be more than 6,000 engineers in the U.S. and Canada. Information is available from: Society of Women Engineers, 345 East 47th Street, New York, NY 10017. (Tel. 212-644-7855).

Geography

The Committee on the Status of Women Geographers of the Association of American Geographers maintains a roster listing about 250 names, addresses, degrees, name and date of latest publication, Ph.D. dissertation or MA/MS thesis, current employment information and the individual's three major interests in geography. Contact Professor Susan Hanson, Dept. of Geography, Clark University, Worcester, MA 01610.

Geology

The Women Geoscientists Committee of the American Geological Institute has compiled a Roster of Women in the Geoscience Professions (3rd edition, January 1982). Its purposes are job placement, communication, education and appointment to advisory positions. Contact Chairman, Women Geoscientists Committee, American Geological Institute, 5205 Leesburg Pike, Falls Church, VA 22041.

Higher Education

Higher Education Administration Referral Service is a nonprofit organization which operates its registry as a general referral service for job placement for professional staff in higher education. It includes all exempt positions of a non-faculty nature. Special effort is made in canvassing potential registrants to include women and minority candidates, though they are not identified separately. It is a confidential and "equal opportunity" service. There is a small fee for registering and fees are charged to institutions using the service. Contact Higher Education Administration Referral Service, Suite 510, One Dupont Circle, N.W., Washington, DC 20036.

The Project on the Status and Education of Women serves as a clearinghouse for information on women in higher education and has developed materials on this subject, including legislative summaries, topical papers on re-entry women, sexual harrassment, minority women and other subjects; and a newsletter On Campus With Women. To receive a free publication list, contact the Project on the Status and Education of Women, Association of American Colleges, 1818 R Street, N.W., Washington, DC 20009.

History

The Committee on Women Historians of the American Historical Association has a published directory of over 2,000 women historians in all specialties including name, address, institutional affiliation, rank, degrees, institution, date of degree, dissertation subject, fields of specialization and publications. The directory is used to inform institutions about the availability of women in various fields of history for employment purposes as well as for conferences, book reviews, etc. Contact Assistant Executive Director, American Historical Association, 400 A Street, S.E., Washington, DC 20003.

A Directory of Black Historians & Others: Commentaries & Essays has been compiled by Dr. Gossie Hudson at Lincoln University. It includes information on blacks and non-blacks currently teaching black history, including addresses, positions, degrees and thesis topics. Extensively indexed, with breakouts by degree, field, sex, location, etc., it also includes a set of essays by historians on the field of black history. The major purposes of the directory are for education and research. The price is $12.50. Contact Vance Bibliographies, P.O. Box 229, Monticello, IL 61856.

The Roster of Minority Graduate Students in History is a list of doctoral candidates divided into five fields of study covering United States, Latin American, European, Asian and African history. Within each field, one page resumes of each person are available. The material covers all minorities, but not specifically women. It is meant to be an employment aid. Compiled biennially, it is available from the History Department University of North Florida, Jacksonville, FL 32216.

Law

The Association of American Law Schools Section on Women in Legal Education has compiled a roster of 93 women in legal education, arranged alphabetically by name, with current address. May be obtained from Association of American Law Schools, One Dupont Circle, N.W., Washington, DC 20036.

Medicine

The Faculty Roster of the Association of American Medical Colleges is a general computerized registry of 50,000 M.D.'s on medical school faculties, used primarily for research and policy planning. Data on women and minorities can be retrieved separately, but no individual names. The Faculty Roster is updated on a monthly basis. In a typical month, about 2,500 faculty records are either added or brought up to date. It is estimated that the roster includes more than ninety percent of all U.S. medical school faculty. Of the 116 U.S. medical schools, 112 regularly report to the AAMC their new accessions, updates and terminations. Contact Association of American Medical Colleges, One Dupont Circle, N.W., Washington, DC 20036

Modern Language

A Directory of Women Scholars in the Modern Languages has been compiled by the Modern Languages Association Commission on the Status of Women in the Profession. This directory of more than

2,600 women qualified in English and foreign languages, cross-referenced by fields of interest including administration, lists name, title, rank, present institutional affiliation, institution and date of highest degree, major publications, honors, memberships and two or three current fields of interest. Published in 1973, it is available for $10 from the Modern language Association of America, 62 Fifth Avenue, New York, NY 10011.

Music

College Music Society's Committee on the Status of Women in the Profession has issued various reports on the Status of Women in College Music. Direct inquiries on the Committee and the reports to: Craig Short, Executive Secretary, College Music Society, Regent Box 44, University of Colorado, Boulder, CO 80309.

Philology

The American Philological Association's Women's Classical Caucus maintains a mailing list of over 150 men and women within the Association in the specialities of linguistics, ancient history, philosophy, Greek and Latin literature and classical archaeology. It can be obtained from Professor Phyllis Culham, Dept. of History, U.S. Naval Academy, Annapolis, MD 21402.

Physics

A special recruitment resource in physics and astronomy is the Committee on the Status of Women in Physics, American Physical Society. Contact American Institute of Physics, Manpower Placement Registry, 335 East 45th Street, New York, NY 10017.

Political Science

Biographical Directory - 1972 lists 226 persons alphabetically and includes address, institutional affiliation, degrees and field of specialization. The fee is $3.50. Contact the National Conference of Black Political Scientists, Carolyn Williams, Treasurer, Dept. of Political Science, Xavier University, New Orleans, LA 70125.

The Committee on the Status of Women in the Profession of the American Political Science Association maintains a roster of approximately 800 women including name, address, position, degree and field, research interest, skills and experience, and an index by field. The fee is $5. Request Women in Political Science, 4th Edition (1976), American Political Science Association, 1527 New Hampshire Avenue, N.W., Washington, DC 20036. A fifth Edition will be available in 1982.

Psychology

A special recruitment resource in psychology is the 1981 Directory. Contact American Psychological Association, 1200 17th Street, N.W., Washington, DC 20036.

Public Affairs

The National Association of Schools of Public Affairs and Administration maintains a roster of its 215 member institutions including data on women and minority faculty and students. The roster can be used as an aid in communication, seeking employment, and by prospective graduate students seeking a supportive atmosphere. First compiled in 1969, it is updated every two years. The fee is $10. Available from the NASPAA, 1225 Connecticut Avenue, N.W., Suite 307, Washington, DC 20036.

Science

The National Institute of Science, a black scientific professional association, has a roster of 300-400 members, including faculty and students. Its main purpose is communication. The roster is updated annually. Contact Dr. L. Shelbert Smith, Executive Secretary, NIS, Chemistry Dept., Central State University, Wilberforce, OH 45384.

AWIS Newsletter provides a listing of jobs available in science and engineering and announces fellowship awards and federally-supported programs in science and engineering. It is published every other month. Each issue is mailed to the 3,500 AWIS members. Additional copies are distributed at science meetings throughout the country. Available for $35 per year, it is free to AWIS members. The AWIS Registry of more than 7,000 women scientists and engineers is computerized for rapid search. It contains biographical information on several thousand women scientists and is organized by specialty. For $60 per position, AWIS will send a list of women looking for employment in the designated field and established persons who may know of other qualified candidates. If the search produces fewer than four candidates, the fee is waived. Each search request must include a purchase order and a detailed statement of position requirements. Contact the Association for Women in Science, Suite 1122, 1346 Connecticut Avenue, N.W., Washington, DC 20036.

Sociology

The Guide to Graduate Departments of Sociology 1981 provides specific information on the output of graduate programs by listing the 1979-80 Ph.D.'s dissertation titles and current positions. Data are collected via a questionnaire sent to all known graduate departments in the U.S. and Canada. The volume, updated annually, is available for $10 from the American Sociological Association, 1722 N Street, N.W., Washington, DC 20036.

Theology

Placement News is a bi-monthly newsletter published by the Women's Theological Coalition for women in theology and ministry at the master's and doctoral levels. The editor is Mary Caldwell, 210 Herrick Road, Newton Centre, MA 01259.

GENERAL

Affirmative Action: A Comprehensive Recruitment Manual provides sources for minority group recruiting, including information on colleges with the largest numbers of Black, Asian, Hispanic and Native American Students. Also includes a list of minority media, a roster of predominantly black colleges, suggestions for recruiting and an extensive bibliography. Available for $15 ($14 prepaid) from Garrett Park Press, Garrett Park, MD 20896.

American Association of University Women has a listing of Professional Women's Groups, May 1981 which offers one or more of these services regarding employment opportunities: a roster of women for employers seeking female applicants, listings of job openings in their newsletters, financial aid and career information. This roster is available for $1 prepaid, from American Association of University Women, 2401 Virginia Avenue, N.W., Washington, DC 20037.

The Black Collegian Resume Service publishes the Monthly Resume File Reader and two Resume Books each year. The Resume File Reader contains pertinent data from each resume. It contains file number, major, university, graduation date, grade point average, career objective, etc. Full copies of the resume can be ordered by sending in the file number. Companies contact the students directly. The Resume Service is provided free to advertisers in The Black Collegian magazine. For more information contact Preston J. Edwards, Publisher, The Black Collegian, 1240 South Broad Street, New Orleans, LA 70125. (Tel. 504-821-5694).

Handbook for Recruiting at Minority Colleges, 1982-83 Edition, contains profiles of 94 four-year colleges and universities with predominant enrollments of minority students. It is used to locate and recruit graduates from predominantly minority colleges. Edited by Andre G. Beaumont and Rena D. Godbolt, it is available for $12.50 from College Placement Services, Inc., 62 Highland Avenue, Bethelehem, PA 18017.

Locating, Recruiting and Employing Women: An Equal Opportunity Approach by Cecelia Foxley lists some 300 women's organizations with talent banks or other employment/career assistance as well as a list of 600 women's counseling and placement centers. The price is $8.50 ($7.50 prepaid). The publication is available from Garrett Park Press, Garrett Park, MD 20896.

Minority Organizations: A National Directory lists approximately 3,200 national, regional and local organizations with largely minority memberships; or whose purpose is service to the minority community. Available for $15 ($14 prepaid) from Garrett Park Press, Garrett Park, MD 20896.

Native American Professional Resource Directory is a computerized roster of over 1,000 Native Americans published in 1973 for educational, communication and employment purposes. Names are listed alphabetically with address, tribe, position, expertise and education. Sponsored by the Bureau of Indian Affairs, the publication is available for $4.50 from the Southwestern Cooperative Educational Laboratory, 229 Truman, N.E., Albuquerque, NM 87108.

Preparing for Affirmative Action: A Manual for Practical Training is a workbook of exercises for training in the area of equal employment. Review set available for $10, from Garrett Park Press, Garrett Park, MD 20896.

Women's Organizations and Leaders Directory - 1982 is an international guide to the women's movement with over 25,000 listings (primarily organizations, government branches, etc.) and their leaders. Cost per book is $70 ($65 prepaid). Contact Today News Service, Inc., National Press Building, Washington, DC 20045.

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